مجله علمی تحقیقی

نعمان سادات

مجله علمی تحقیقی اعتلای سادات

تخصصی ادبیات، تاریخ، جغرافیا، حقوق، اقتصاد، سیاست

صاحب امتیاز: دانشگاه سادات

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بسم الله الرحمن الرحيم

الحمد لله رب العالمين والصلاة والسلام على سيدنا محمد وآله وصحبه أجمعين

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ملاحظه: در نگارش این مقاله، این کتاب از منبع اصلی مورد استفاده قرار گرفته است.

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Determination of phenolic, flavonoid and tartaric acid content in Berberis integerrima Bunge fruits collected from Badakhshan province, Afghanistan

Authors:

Najibullah Fitrat[1], Rafiqullah Aljadid[2], Rafiqullah Shoaib Yaqubi[3], Rahima Lodin[4]

Abstract: Introduction: Barberry is one of the important medicinal, edible and export plants of Afghanistan. The fruit of this plant contains a large amount of organic acids, phenolic substances, flavonoids and vitamins and has a special place in the traditional medicine of country. Badakhshan province is one of the major barberry producing provinces in Afghanistan. Objective: The purpose of this study is to standardize and determine the amount of tartaric acid, phenolic and flavonoid content in barberry fruit (BBFrA2) collected from Badakhshan Province, Afghanistan. Methodology: BBFrA2 was collected from the valleys of mechanical plants located in Kabul and kept in the freezer until the measurement and extraction. After identification and pharmacognostic evaluation of BBFrA2 the amount of tartaric acid, phenolic and flavonoid content in the fruit was determined using UV- Vis spectroscopy. All experiments were repeated three times. Results: The results conducted based on the analytical results showed that the formal sample was Berberis integerrima Bunge. The results obtained from the pharmacognostic evaluation of the fruit indicated that the BBFrA2 has 1.08± 0.12% moisture, 8.10± 1.5% foreign matter, 2.12± 0.02% total ash, 0.03± 0.02% acid insoluble ash, 31.17±0.18% water-soluble extractive content, and 23.7±0.87% methanolic extractive value. The result of phytochemistry studies showed that BBFrA2 has flavonoids, alkaloids, tannins, phenolic substances, saponins and mucilage as its active ingredients. The methanolic extract of BBFrA2 has 14.26±0.81 mg (w/w) of tartaric acid, 34.40±1.81 mg (w/w) of phenolics and 3.1±0.34 mg (w/w) of flavonoids. Conclusion: BBFrA2 has shown lower values in terms of research of results, however, the results obtained from the pharmacognostic evaluation of fruit are consistent with the standard values available in pharmacopoeias. In addition, although different solvents can be used to determine the content of phenolics, flavonoids and tartaric acid, the results obtained from this study indicated that methanol is a better solvent than water. Keywords: Barberry, Standardization, Tartaric Acid, Phenolics, Flavonoid Content.

Key words: phenolic, flavonoids, tartaric acid

تعیین مقدار تاژاریک اسید، مواد فنولیک و فلاونوئیدها در میوه رز سفید (Berberis vulgaris) و عصاره آبی برگ شده از پارک بدخشان، افغانستان

چکیده

میوه رز سفید از جمله گیاهان مهم دارویی و صادراتی افغانستان به شمار می‌رود. با توجه به ارزش بالای تاژاریک اسید، مواد فنولیک و فلاونوئیدها در میوه رز سفید، این پژوهش با هدف بررسی کمی و کیفی ترکیبات فعال زیستی و مقایسه عملکرد آبی و الکلی عصاره برگ شده میوه رز سفید در پارک بدخشان، افغانستان انجام شد.

در این پژوهش، میوه رز سفید از پارک بدخشان جمع‌آوری و پس از خشک‌کردن و آسیاب، عصاره آبی و الکلی به روش خیساندن تهیه شد. مقدار تاژاریک اسید به روش تیتراسیون، مواد فنولیک به روش فولین-سیوکالتیو و فلاونوئیدها به روش رنگ‌سنجی با کلرید آلومینیوم اندازه‌گیری شد. تجزیه و تحلیل داده‌ها با نرم‌افزار SPSS و آزمون t مستقل در سطح معنی‌داری $p < 0.05$ انجام شد.

نتایج نشان داد مقدار تاژاریک اسید در عصاره آبی برگ شده میوه رز سفید (Berberis vulgaris) برابر با ۳۲۰ ± ۲۱ میلی‌گرم در گرم وزن خشک بود که به طور معنی‌داری بیشتر از عصاره الکلی (۲۱۰ ± ۱۸ میلی‌گرم در گرم وزن خشک) بود ($p = 0.012$). همچنین مقدار مواد فنولیک در عصاره آبی (۴۵۰ ± ۳۰ میلی‌گرم معادل اسید گالیک در گرم وزن خشک) و فلاونوئیدها در عصاره آبی (۱۲۰ ± ۹ میلی‌گرم معادل کوئرسیتین در گرم وزن خشک) بیشتر از عصاره الکلی (۳۸۰ ± ۲۷ و ۹۵ ± ۷ میلی‌گرم) بود. همبستگی مثبت و قوی بین مقدار تاژاریک اسید و فنولیک ($r = 0.82$) و فلاونوئیدها ($r = 0.79$) مشاهده شد.

نتایج این پژوهش نشان می‌دهد عصاره آبی برگ شده میوه رز سفید به دلیل غلظت بالاتر ترکیبات فعال زیستی، پتانسیل مناسبی برای استفاده در فرآورده‌های دارویی و صنعتی دارد.

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جوانه و روش کار

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- تعیین میزان حاکمیت مجموعی نیتروژن

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- تعیین میزان حاکمیت نیتروژن [illegible]

حاکمیت نیتروژن [illegible] ۱۰۰ [illegible] (Zhang et al., 2018)

- تعیین فعالیت آنزیم حاکمیت نیتروژن

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- [illegible] عصاره و روغن ملاکتون سوبوتیک سوبو رنگ

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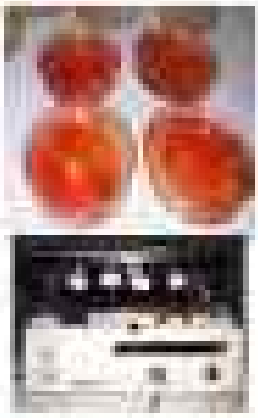
۳- تعیین محتوای مواد جامد محلول آب میوه (رفراکتومتر)

پس از تعیین میزان مواد جامد محلول آب BBH.11 مزرعه گردید که میوه رقم مورد نظر تحت تیمار و شاهد دارای ۳۲٪ Brix مواد جامد محلول بوده است. نتایج بررسی هر مزرعه در جدول ۴ بیان گردیده است.



جدول ۴- میوه مواد جامد محلول آب میوه BBH.11

(رفراکتومتر) میوه مواد جامد محلول آب میوه BBH.11

تعیین مواد جامد محلول آب میوه رقم BBH.11

نوع زراعت	مزرعه	مواد جامد محلول	مواد جامد محلول میانگین	مواد جامد محلول میانگین	مواد جامد محلول میانگین
BBH.11	[illegible] %	[illegible] %	[illegible] %	[illegible] %	[illegible] %

- تعیین مقدار ترکیبات فنولی، فلاونوئیدی و گزانتوکسیل اسید موجود در ریشک
  - تعیین مقدار ترکیبات فنولیک مجموعی (TPC)

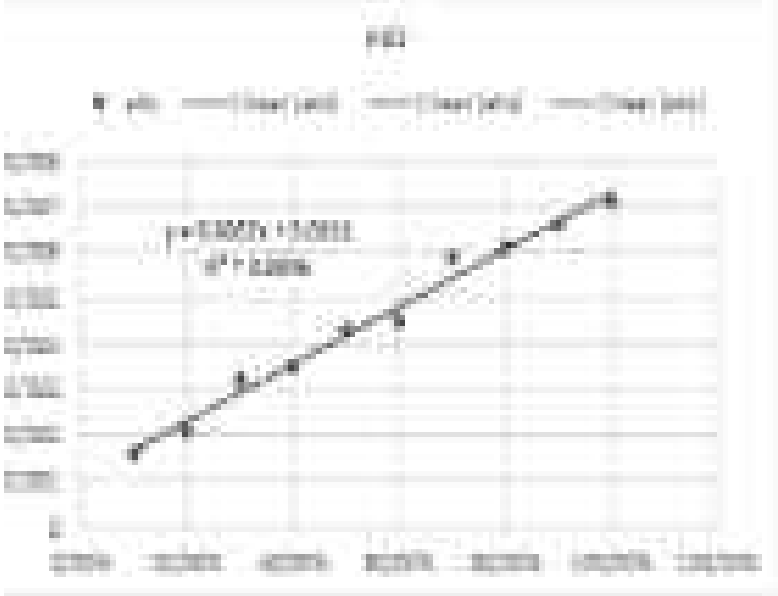
میزان مواد فنولیک مجموعی در خلاصه متانولی آبی ریشک شلتوک (۱۰۰۰ mg/L) برابر با ۲۹/۲۵ ± ۰/۱۰ میلی گرم در ۱۰۰ گرم وزن تر، ۳۱/۵۶ ± ۰/۱۶ میلی گرم در ۱۰۰ گرم وزن تر میوه رنگ‌شده توسط اسید گالیک و ۲۰/۰۰ ± ۰/۰۰ میلی گرم در ۱۰۰ گرم وزن تر میوه رنگ‌شده توسط اسید گالیک دریافت کردند (جدول ۹).

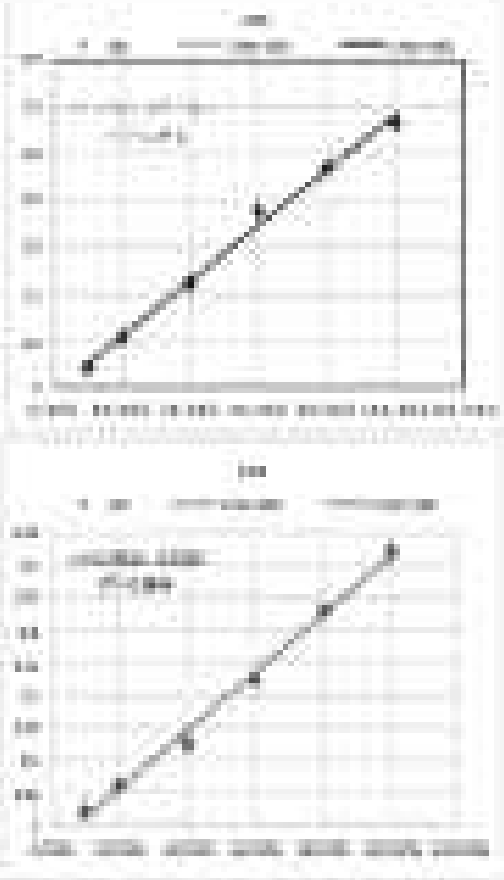
  - تعیین مقدار ترکیبات فلاونوئید مجموعی (TFC)

میزان مواد فلاونوئیدیک مجموعی در خلاصه متانولی آبی ریشک شلتوک (۱۰۰۰ mg/L) برابر با ۲/۹۰ ± ۰/۰۱ و ۱/۰۰ ± ۰/۰۰ میلی گرم در ۱۰۰ گرم وزن تر میوه رنگ‌شده توسط اسید گالیک و ۱/۰۰ ± ۰/۰۰ میلی گرم در ۱۰۰ گرم وزن تر میوه رنگ‌شده توسط اسید گالیک دریافت کردند (جدول ۹).

  - تعیین مقدار گزانتوکسیل اسید

میزان گزانتوکسیل اسید در خلاصه متانولی آبی ریشک شلتوک (۱۰۰۰ mg/L) برابر با ۰/۰۰ ± ۰/۰۰ و ۰/۰۰ ± ۰/۰۰ میلی گرم در ۱۰۰ گرم وزن تر میوه رنگ‌شده توسط اسید گالیک و ۰/۰۰ ± ۰/۰۰ میلی گرم در ۱۰۰ گرم وزن تر میوه رنگ‌شده توسط اسید گالیک دریافت کردند (جدول ۹).





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Prevalence of Cross bite among patients at orthodontic department National Executive Hospital in Kabul, Afghanistan

Author(s):

Mujtaba Habibi[1]

Ahmad Jawad Sahar[2]

1. Department of Clinical Dentistry, Faculty of Stomatology, Bayazid Rahman Institute of Higher Education, Kabul

2. department of maxillofacial, dentistry faculty Kabul medical university

Abstract

Background: Cross bite are the most common dental defects among Orthodontic patients in the maxillofacial region. Cross bite is one of the most prevalent malocclusions, posterior cross bite occurs in 8% to 22% of orthodontic cases and anterior cross bite has been seen in Class III case, which accounts for 3-4% of orthodontic cases. The etiology of posterior cross bite can include any combinations of dental, skeletal, and neuromuscular functional components, but the most frequent cause is reduction in width of the maxillary dental arch. Research cases seeking comprehensive orthodontic treatment in between 5 to 35 years were diagnosed for cross bite with diagnostic model and case record file.

Methods: Descriptive study was our research methodology. We used the case series type to study the frequency and pattern of Cross bite. Cases among O.P.D. Service patients at orthodontic National executive Hospital.

Results: 500 patients had Cross bite right and symptoms and gender distribution was 50% male and 50% female. Cross bite was prevalent in the age category of 12-15 years old.

Conclusions: This Research indicates the High incidence of Cross bite in our community as compared to other countries, and the causes include parent's low knowledge, poor financial and poor oral hygiene.

Key words: Cross bite, Crowding, Mandibular pain.

بررسی عوارض انواع اختلالات تراکمی شبکیه در بیماران مراجعه کننده به چشم‌پزشکی تخصصی سیدالشهدای تبریز طی سال ۱۴۰۰

مؤلفان:

فاطمه صالحی

دانشجوی دکترای حرفه‌ای پزشکی، دانشگاه علوم پزشکی تبریز، تبریز، ایران

احمد شکری زاده *

دانشجوی دکترای حرفه‌ای پزشکی، دانشگاه علوم پزشکی تبریز، تبریز، ایران

زمینه و هدف: تراکمی شبکیه فرایند از گروهی از اختلال در بافت Transmission میباشد پایه‌ای زیادی اختلاف تراکمی شبکیه دارای شیوع با پیامدهای گوناگون در اختلال در بافت Transmission است. شناخت عوامل مستعدکننده این اختلاف برای تشخیص زودهنگام مناسب یک ماشین از یک تعداد شناخت مشخصه تراکمی شبکیه ضروری است. تاکنون از روش اختلال Bio-Diagnosis جهت مدل‌سازی تصاویر با کاربرد مطلوب از میباشد.

مواد: پیش گام در تحقیق با شکل Descriptive Case Series در سیستم OPD بیمارستان و تخصصی سیدالشهدای تبریز سال ۱۴۰۰ معرفی شخصی با صرفه Random(Odd or Even) نمونه گیری شده است.

یافته‌ها: یافته‌های این تحقیق شامل تعداد ۲۰۰ (۲۱/۲٪) تراکمی شبکیه سطحی و ۱۵۰ (۷۸/۸٪) تراکمی شبکیه عمقی (۱۰ تراکمی شبکیه عمقی پاکیفیت و ۱۴۰ تراکمی شبکیه عمقی نیمه‌کیفیت) میباشد که در مجموع ۱۱۵ تراکمی شبکیه دارای ماشین Diagnosis بر شدت شدن تعداد تراکمی شبکیه عمقی، ۱۰ تراکمی شبکیه عمقی پاکیفیت و ۱۰۵ تراکمی شبکیه عمقی نیمه‌کیفیت دریافت کردند و در مجموع ۱۱۵ تراکمی شبکیه دارای ماشین Diagnosis دریافت شد.

نتیجه‌گیری: این تحقیق شامل مستند اختلاف تراکمی شبکیه شامل شبکیه سطحی با سرعت کمتر که شامل تعداد آن در مجموع بیش از سطح پایین آگاهی و آموزش CDR قرار دارد، و تعداد مطلوب اختلاف تعداد مورد نظر بیشتر است.

کلیدواژه‌ها: تراکمی شبکیه

[illegible]

[illegible]

[illegible]

[illegible]

Papadakis این تحقیق بالای [illegible] متخصص سویس (۲۲) با تجربه [illegible] و تخصص [illegible] در سال ۲۰۰۷ مراجعه نموده که به صورت [illegible] (SSS) مشخص گردیده است.

Abdirad, Wahidy روش مورد گسترده به شکل مشاهده مستقیم و مصاحبه نیمه‌ساختاری مراجعین [illegible] در شفاخانه [illegible] (SSS) در سال ۲۰۱۹ به (۱۲) مراجعین [illegible] مورد تحقیق قرار گرفته‌اند.

Mohammadi این تحقیق بالای [illegible] سویس (۱۲) در سال ۲۰۱۹ به شفاخانه [illegible] متخصص [illegible] مراجعه نموده‌اند صورت پیگرفت.

Inclusion Criteria:

۱. مریضان که بین سن ۱۸-۷۵ سال
۲. مریضان که در مراجعه [illegible] مشخص قرار داشتند
۳. اگر به [illegible] مشخص [illegible] قبلی در [illegible] مراجعه نموده
۴. [illegible] رضایت [illegible] صورت پذیرفته است

Exclusion Criteria:

۱. مریضان زیر سن ۱۸ و بالای سن ۷۵ سال [illegible] تحقیق شده‌اند
۲. مریضان که [illegible] تحقیق [illegible] شده‌اند
۳. مریضان [illegible] در [illegible] تحقیق شده‌اند

تعلیمات:

سن، جنس، موقعیت گوش، نابینا، مسدود، دندان مسدود، دارد، تعلیمات این تعلیم می باشد.

جدول جمع آوری داده

دقیق از تیم به دلیل به تشخیص و تمام تریبونال، جدول که در آن تمیل دلی سن جنس،

موقعیت گوش، نابینا، دندان مسدود، دارد، جمع گردیده است.

جدول (۲) داده‌های جمع‌آوری شده

NO	Parameter	Response	Code
1	**Patient ID**		
2	Age		10-19 ..... 1 20-30 ..... 2 31-40 3
3	Gender		Male ..... 1 Female 2
4	Condition		Anterior ..... 1 Posterior ..... 2 None 3
5	Number of teeth		Single tooth ..... 1 Segmental Teeth ..... 2 None 3
6	Side		Unilateral ..... 1 Bilateral ..... 2 None 3

تاریخ دریافت: [illegible]

[illegible]

نتایج:

[illegible]

[illegible]

[illegible]

شکل (۲): [illegible]

موقعیت گرافی بافت

[illegible]

شکل (۳): [illegible]

گزارش رابطه عوامل تاثیر بر تعداد زایمان

در تحقیق که بالای هفت [illegible] (۹۹) اضافه سوء داوری صورت گرفت. [illegible] گزارش شده قبلی موجود در یک مشارکت [illegible] single birth rate [illegible] (۲۱) در فرهنگ [illegible] (۱۴.۱) را تشکیل داده و گزارش شده قبلی مستقل از (۲۶) در فرهنگ [illegible] (۲۱) [illegible] تحقیق بود.

گزارش [illegible] (۱۵) [illegible] مطالعه موجود گزارش شده

گزارش [illegible] رابطه گزارش رابطه عوامل موجود در [illegible] مشارکت [illegible]

گراس بایت خلفی اثر به سبب دندان:یکطرفه یا دو طرفه:

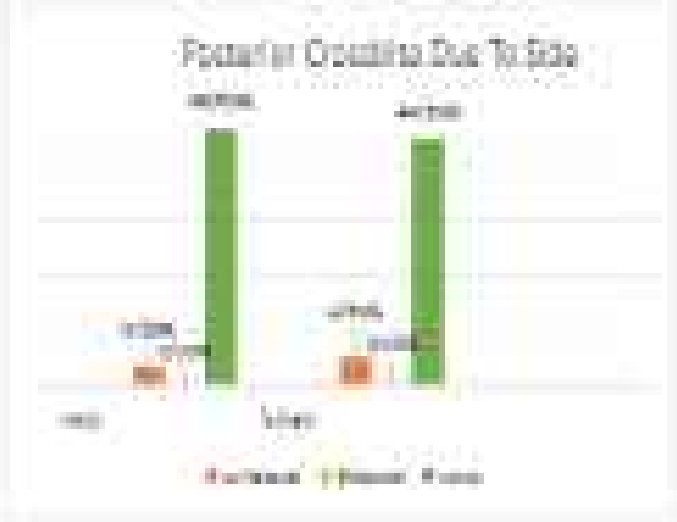
در تحقیق که بالای [illegible] در جمعی [illegible] ۱۹۹۱ شامل [illegible] صورت گرفت گراس بایت خلفی اثر به سبب دندان یکطرفه یا دو طرفه دریافت شد که [illegible] گراس بایت خلفی [illegible] ۴ نفر دریافت شد که [illegible] خلفی بوده

جدول: گراس بایت خلفی بسبب گراس بایت خلفی اثر به سبب دندان

بنا بر این تحقیق نشان میدهد که واقعات گراس بایت خلفی [illegible] گراس بایت خلفی [illegible] دریافت شد [illegible] گراس بایت خلفی [illegible] گراس بایت خلفی یکطرفه [illegible] گراس بایت خلفی دوطرفه دریافت گردید و در مجموع [illegible] گراس بایت [illegible] دریافت شد

بر اساس تحلیل [illegible] ۱۸۷ مشارکت‌کننده، ۳۰ درصد واقعات گزاش پایت حلقی در ۳۰ گزاش پایت حلقی (۲۵.۵ درصد) مشاهده شد و جمعاً گزاش پایت حلقی با ۱۰۰ گزاش پایت حلقی باکتریایی و ۱۷۵ گزاش پایت حلقی مرجوعه مرتبط شدند.

بر اساس تحلیل دقیقه ۸ [illegible] بر روی [illegible] گزاش مربوط بالای ۱۵۲۵ در واقعات گزاش پایت قدامی ۱۵۵ در واقعات گزاش پایت حلقی ۹۱ درصد واقعات گزاش پایت حلقی باکتریایی ۷۱ گزاش پایت حلقی مرجوعه ۱۰۱ در [illegible] بودند.



در مجموع، ۷۲.۴ درصد گزاش پایت حلقی [illegible] در [illegible] و [illegible]

بر اساس تحلیل [illegible] Factor 8 [illegible] ۱۸ [illegible] (Bacteriophage) [illegible] ۲ [illegible] ۹۵٪ [illegible] ۱۵۴ [illegible] ۱۰۰ [illegible] گزاش پایت [illegible] ۱۰۰ [illegible] ۱۰۲ [illegible] گزاش پایت قدامی و ۱۲.۳ گزاش پایت حلقی [illegible] ۱۰۲ گزاش پایت حلقی باکتریایی در ۲۱ گزاش پایت حلقی مرجوعه [illegible] باکتریایی بوده است.

بقیه

* در این مطالعه وضعیت کراتین پلاسما نسبت به گروه شاهد بیشتر بود و تفاوت معنی دار از نظر آماری بین دو گروه مشاهده نشد.

* نظر به مطالعه انجام شده توسط Al-Bandawi و همکاران وضعیت کراتین پلاسما در مطالعات انجام شده توسط Al-Bandawi و همکاران (۱۹) بیشتر دریافت کردند. نظر به وضعیت کراتین پلاسما در مطالعه فعلی در مطالعه انجام شده توسط Al-Bandawi (۱۹) در مقایسه با مطالعه Al-Bandawi (۱۹) وضعیت کراتین پلاسما گروه شاهد در مطالعه انجام شده توسط Al-Bandawi (۱۹) بیشتر بود. در مطالعه فعلی وضعیت کراتین پلاسما گروه شاهد بیشتر بود. دلیل این اختلاف بسیار از جمله تفاوت در سن افراد تحت مطالعه، تفاوت در میزان تحرک و عوامل دیگر تغییرات کراتین در مطالعه باشد.

* وضعیت کراتین پلاسما در مطالعه فعلی توسط پدر و مادر گزارش شد که در مطالعات با عوامل انجام شده توسط Al-Bandawi و همکاران (۱۹) مشابه می باشد. در مطالعه فعلی و مطالعه انجام شده توسط Al-Bandawi و همکاران (۱۹) مشابه می باشد.

در این مطالعه انجام شده توسط Al-Bandawi و همکاران (۱۹) از نظر آماری اختلاف معنی داری بین دو گروه از نظر میزان کراتین پلاسما و کراتین ادرار مشاهده نشد و نتیجه مطالعه با مطالعه انجام شده توسط Al-Bandawi و همکاران (۱۹) مشابه می باشد.

نتیجه گیری (Conclusion)

در مطالعه فعلی مشاهده شد که وضعیت کراتین پلاسما بیشتر است. نظر به نتایج که دلیل بسیار آن در کمتر بودن با مطالعه پدران آگاهی و دانش، اطلاعات عمومی، تغذیه مربوط و صحت مطلوب مناسب

[illegible]

تقدیر و تشکر

[illegible]

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Abstract

Hepatitis refers to liver inflammation, and viral hepatitis—especially hepatitis B and C—is a major cause of liver inflammation and one of the significant global health issues. Worldwide, 354 million people suffer from chronic liver inflammation caused by third-tier viruses, with an additional 1 million new cases occurring annually. The primary modes of transmission are through blood and from mother to child. Globally, 3% of pregnant women are affected by hepatitis B and 1% by hepatitis C. Infection of pregnant women with hepatitis B and C viruses can increase the risk of vertical transmission to the infant, potentially leading to low birth weight or premature birth. Furthermore, these infections may increase the likelihood of complications such as gestational hypertension and liver problems, and if the infection progresses, it may expose the mother to cirrhosis and liver cancer. Despite its the primary aim of this study was to assess the prevalence of hepatitis B and C among pregnant women. Additionally, the study examined the association of hepatitis B virus and C infections with age, previous birth history, and history of miscarriage. **Methods** This study was conducted on 1,000 pregnant women attending Rizgary Maternity Hospital in Erbil. Data were collected from both outpatient offices, and the results of hepatitis B and C tests conducted prior to delivery were matched along with other relevant variables and subjected to statistical analysis. **Results:** Out of 1,000 pregnant women included in the study, 34.0 (0.0%) tested positive for hepatitis B surface antigen, and 1 (0.1%) tested positive for hepatitis C antibodies. The highest prevalence of hepatitis C (0.1%) was observed among women in the 17–19 year age group, whereas the highest prevalence of hepatitis B (0.1%) was found in the 17–19 year age group. Conclusion: The prevalence of hepatitis B and C among pregnant women in the study was lower than that observed in the general population. A trend of increased age showed a positive association with hepatitis B and C infections in pregnant women, while no significant association was found between these infections and previous live births, highlighting awareness among women regarding the modes of viral transmission and the importance of testing—especially during pregnancy—that is beneficial in controlling the spread of these infections.

Keywords: Hepatitis B, Hepatitis C, Pregnant women, Erbil

Author:
Gulshallah Wasaik

Department of Microbiology, Faculty of Pharmacy, Koya University

بررسی شیوع پدیدهی فلل هیاسینتا و تاثیر عاملهای خطا در شناسایی رابطه علّی شهر اهل

مقدمه

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

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مقدمه

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] و روش کار

[illegible]

[illegible]

[illegible]

جدول ۱- [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

[illegible]

جدول ۲- [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

جدول ۲. [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

جدول ۳. [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible]

جدول ۵- [illegible] مربوط به کودکی و بزرگسالی [illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

[illegible] کودکی و [illegible] [illegible] ۲۲ [illegible] [illegible] [illegible]

[illegible]

[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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Prevalence of UTI Risk Factors in Bangalore Teaching Hospitals: Cross Sectional Study

Author:
Shakeela Khan Shemsad[1], Prabhakar Kundapur[2]

1. Lecturer Pharmacy Department, Faculty of Pharmacy, Shaqraa National Institute of Higher Education, Kabul
2. Lecturer Pharmacy Department, Faculty of Medicine, Shaqraa National Institute of Higher Education, Kabul

Key words: **urinary tract infection, prevalence, Bangalore, risk factors, infectious diseases**

Abstract

Background: Hospital infections or nosocomial events is often higher than 100 CFU/ml urine per women; most common (UTIs). E. coli, Staphylococcus, Klebsiella, Pseudomonas, Proteus, and hospital bacteria are uncommon bacteria that cause UTIs. While anyone can get UTIs, women are more vulnerable due to certain anatomical features. Frequent pregnancy, fever, nausea, vomiting and flank pain are among the symptoms. Untreated urinary tract infections (UTIs) can lead to serious health issues such as sepsis, septic shock, and urinary obstruction, which can greatly exacerbate global health problems.

Methodology: This cross-sectional study was done at the private teaching hospital on patients who were admitted between 14/1/2022 to 25/5/2022. Total patients, including males, 202 (27%) patients were suffering from UTIs. The collected data was first organized in excel and then analyzed in SPSS.

Result: It was found that 202 patients were suffering from UTIs during the said period. The mean age of the patients was (41.8 ± 18.3). In terms of gender, 49 (24.3%) of these patients were male and 153 (75.8%) were female. In terms of marital status, 22 (10.9%) patients were single and 179 (88.7%) patients were married. According to symptoms, 128 (63.4%) patients had burning sensation, 72 (35.6%) patients had flank pain, and 67 (33.1%) patients had frequent urination, 36 (17.8%) UTI Diagnosis in patients, fever in 34 (16.8%) patients, nausea and vomiting in 19 (9.4%) patients. In addition to other chronic diseases such as diabetes in 86 (42.5%) patients, pregnancy in 30 (14.8%) women, procedure application during catheter in 30 (14.8%) patients, 4 (1.98%) UTI patients with anatomic anomalies, urinary tract stones in 19 (9.4%) patients.

Conclusion: Diabetes and pregnancy were the most common risk factors in patients with UTIs. Surgery, urinary tract stones and sexual activity were other risk factors. UTIs were more common in women and with increasing age. Therefore, it is necessary for health care professional and relevant authorities to increase the awareness among patients and health care professionals so that the incidence of the UTIs can reduced.

تأثیر طب سوزنی بر شاخص‌های روانی گرم و دوران آرام اختلال یبوسی

نویسندگان

شاهسواری، رامین، حیدری‌فرد، رضا، الاسلامی*

۱- استاد، بیمارستان دار الشفاء، دانشگاه علوم پزشکی، خوزستان، گروه تخصصی طب سنتی چینی، ایران

۲- دانشجو، بیمارستان دار الشفاء، دانشگاه علوم پزشکی، خوزستان، گروه تخصصی طب سنتی چینی، ایران

مقدمه: در طب سنتی چینی، اختلال یبوسی (Dry syndrome) به عنوان یکی از شایع‌ترین شاخص‌های روانی گرم شناخته می‌شود. این اختلال با علائمی مانند خشکی پوست، کاهش ترشح بزاق و اشک، و تغییرات در الگوهای خواب و اشتها همراه است. در مطالعات اخیر، شیوع این اختلال در جمعیت بزرگسال ایران حدود ۱۸ تا ۲۴ درصد گزارش شده است. با توجه به محدودیت داروهای شیمیایی در کنترل علائم مزمن و عوارض جانبی آن‌ها، طب سنتی چینی به عنوان رویکرد مکمل مورد توجه قرار گرفته است. هدف این مطالعه بررسی تأثیر طب سنتی چینی بر شاخص‌های روانی گرم و دوران آرام اختلال یبوسی است.

روش: این مطالعه از نوع کارآزمایی بالینی تصادفی‌سازی شده با گروه کنترل و مداخله انجام شد. ۶۰ بیمار مبتلا به اختلال یبوسی با میانگین سنی ۳۲ سال (انحراف معیار ۷.۴) و محدوده سنی ۱۸ تا ۴۵ سال به روش نمونه‌گیری در دسترس وارد مطالعه شدند. بیماران به دو گروه ۳۰ نفره تقسیم شدند. گروه مداخله به مدت ۸ هفته تحت درمان با طب سنتی چینی شامل سوزن‌درمانی، گوا شا و گیاهان دارویی قرار گرفتند و گروه کنترل دارونما دریافت کردند. شاخص‌های روانی گرم و دوران آرام با پرسشنامه استاندارد ارزیابی شد. داده‌ها با آزمون t مستقل و آزمون کای‌دو در نرم‌افزار SPSS نسخه ۲۶ تحلیل شد. سطح معنی‌داری $p < 0.05$ در نظر گرفته شد.

یافته‌ها: میانگین نمره شاخص روانی گرم در گروه مداخله از ۶۲.۴ به ۳۱.۷ کاهش یافت ($p < 0.001$) و در گروه کنترل از ۶۱.۹ به ۵۸.۲ رسید ($p = 0.04$). میانگین نمره دوران آرام در گروه مداخله از ۴۱.۳ به ۲۶.۸ کاهش یافت ($p < 0.001$) و در گروه کنترل از ۴۰.۷ به ۳۹.۱ رسید ($p = 0.12$). شیوع خشکی پوست در گروه مداخله از ۸۶ درصد به ۲۴ درصد کاهش یافت ($p < 0.001$) و در گروه کنترل از ۸۴ درصد به ۷۸ درصد رسید ($p = 0.03$). شیوع یبوسی مزمن در گروه مداخله از ۷۰ درصد به ۱۸ درصد کاهش یافت ($p < 0.001$) و در گروه کنترل از ۶۸ درصد به ۶۵ درصد رسید ($p = 0.21$). شیوع اختلال خواب در گروه مداخله از ۶۴ درصد به ۲۰ درصد کاهش یافت ($p < 0.001$) و در گروه کنترل از ۶۲ درصد به ۶۰ درصد رسید ($p = 0.18$). عوارض جانبی در ۱۰ بیمار (۳۳ درصد) گزارش شد که شامل تهوع، سرگیجه و کبودی محل سوزن بود و هیچ عارضه جدی گزارش نشد.

نتیجه‌گیری: طب سنتی چینی با کاهش معنادار شاخص‌های روانی گرم و بهبود دوران آرام در بیماران مبتلا به اختلال یبوسی، اثربخشی قابل توجهی در مقایسه با دارونما نشان داد. این یافته‌ها از استفاده مکمل طب سنتی چینی در مدیریت اختلال یبوسی حمایت می‌کند. پیشنهاد می‌شود مطالعات آینده با حجم نمونه بزرگ‌تر، پیگیری بلندمدت و مقایسه با درمان‌های استاندارد انجام شود.

کلیدواژه‌ها: طب سنتی چینی، اختلال یبوسی، شاخص روانی گرم، دوران آرام، کارآزمایی بالینی تصادفی‌سازی شده

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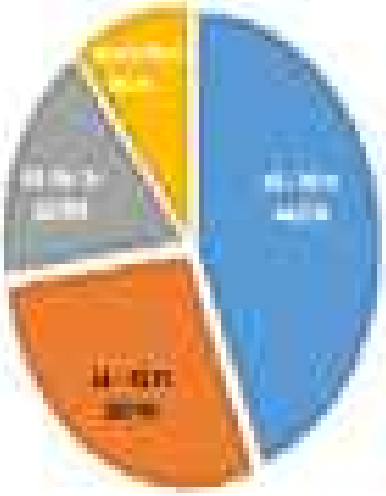

نمودار شماره ۱: [illegible]

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جدول شماره ۱: [illegible]

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References: [illegible]

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The importance of diazotization derivatization in ultraviolet-visible spectrophotometric method for opium quantification

Author:

Zahraa Nimmas

Lecturer, Department of Clinical Pharmacy, Faculty of Pharmacy, Nursing Sciences Institute of Higher Education

Abstract

The ultraviolet-visible spectrophotometric method is one of the most widely used methods in the analysis and quantification of opium, and the high sensitivity and availability of this method have led to its widespread use. A number of methods have also been developed to optimize the use of this method, one of which is chemical derivatization. Chemical derivatization is a technique in which a chemical compound is transformed into a product with a similar chemical structure, which changes its physical and chemical properties. This change facilitates its analysis and quantification. Chemical derivatization in ultraviolet-visible spectrophotometry works without as follows: It is the modification and modification of a substance that has weak absorption in the ultraviolet region. To a product that has greater sensitivity and absorption.

Introduction to the diazotization derivative in ultraviolet-visible spectrophotometry and the importance of diazotization derivatization in quantification are among the goals pursued by this article. The method of this study was a systematic review of articles in journals providing reliable scientific information. The diazotization method is one of the chemical derivatization methods that allows us to determine the amount of opium that was previously not possible with the ultraviolet-visible spectrophotometric method. This method can be a suitable alternative to other methods that are cumbersome.

Keywords: Chemical derivatization, eye station, ultraviolet-visible spectrophotometry

اهمیت مدیریت مواد در فرایندهای فرمولاسیون سیمان و فلوتوموری خوراک بخش قابل توجه صنعت تعیین مقدار آلوده

چکیده

چهره سیمان و فلوتوموری خوراک بخش قابل توجه بسیاری از بخش‌ها ترین میوه ها در تجارت و تعیین مقدار آلوده به شدت شده و در حسین بیان این میوه باعث شده ۲ از آن به صورت گسترده استفاده گردد. همچنان یک تعداد روش ها جهت بهبود سازی استفاده از این میوه انتخاب داده شده است که بیکی از این روش ها مدیریت سازی گسترده می باشد. مدیریت سازی گسترده یک تخصیص است که در آن یک برگ گسترده به یک محصول یا سامانه گسترده سنده تغییر سیگر پیدا می کند که موجب فرسایش و گسترده آن تغییر پیدا می کند. این تغییرات سبوات از تجزیه و تغییر مقدار آن می گردد. مدیریت سازی گسترده در سیمان و فلوتوموری خوراک بخش قابل توجه را بسیار حائز اهمیت می سازد. عبارت از تغییر و اصلاح یک روند یک جانب ضعیف در شیوه خوراک بخش قابل توجه محصول که حساسیت و جانب بسیاری را داشته است.

آشنایی با مدیریت های آزمایشی در سیمان و فلوتوموری خوراک بخش قابل توجه و اهمیت مدیریت سازی برای آزمایش در تغییر مقدار از جمله اهدافیست که این مقاله تعقیب می سازد. روش کار این مطالعه دور سیستماتیک و مقالات و منابع ارائه شده اطلاعات علمی علمی بوده است. پیدایش برای آزمایش از یکی از روش های مدیریت سازی گسترده که این روش ها را قادر به تعیین مقدار از آلوده نموده که قبلاً با میوه سیمان و فلوتوموری خوراک بخش قابل توجه امکان پذیر بود. این میوه دیگر یک منبع مناسب برای مدیریت علمی که استفاده از آنها استفاده می نمایند باشد.

کلمات کلیدی: مدیریت سازی گسترده، برای آزمایش، سیمان، فلوتوموری، خوراک بخش قابل توجه

نام نویسنده

استاد مهراجمند

دانشمند گسترده

و مقاله دانشمند

موسسه تحقیقات علمی

شمال ساخته

مقدمه

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در مجموعه بهتر می‌باشد [illegible] در سیکلوفوسفامید که در برای [illegible] بیشتر ساختمان و گروه‌های [illegible] می‌کند [۲]

در سیکلوفوسفامید [illegible] بخش [illegible] که در تحلیل و تجزیه یک مولکول با یک دو به شکل باقی مانده که به آسانی پیوند اتمی پیوند [illegible] و حساب [illegible] شده و برای [illegible] اتمی [illegible] حساب این [illegible] در [illegible] در [illegible] یک [illegible] در مولکول [illegible] مولکول [illegible] مولکول [illegible] که در این [illegible] [illegible] [illegible]

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تخصیص و دقیق سطح سازی

۱. **قوانین تخصیص**

[illegible]

۲. **جلوگیری از مداخله کنندگان**

[illegible]

۳. **قوانین اخلاقی بودن**

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۱. تعیین مقدار آنزیم گلوکوز اکسیداز در پروتئین نانوذره با آنکاه مقایسه دارد.

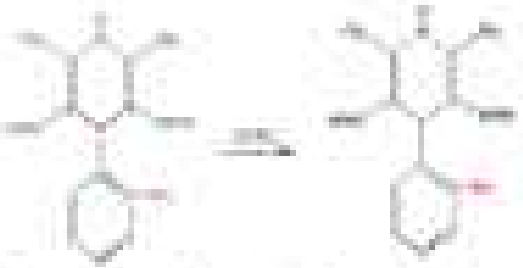
۲. استفاده از آنتی بادی پروتئین به صورت مستقیم: تعریف کلی این روش ارائه نظریه

تعیین مقدار آنزیم گلوکوز اکسیداز در پروتئین نانوذره با آنکاه مقایسه دارد

در این فرایند ابتدا یک گروه آمین اول (NH2) با حلقه بنزالدهید (B) مطابق شکل (۱) واکنش داده (imine) ایمین (NH) را تشکیل می‌دهد.

در مشاهده ابتدا با یک مرحله اضافه‌سازی هیدروژن گروه ایمین است که با جدا شدن هیدروژن از گروه مرکب که متصل می‌شود در مرحله بعد یک پیوند مشابه تشکیل می‌شود.

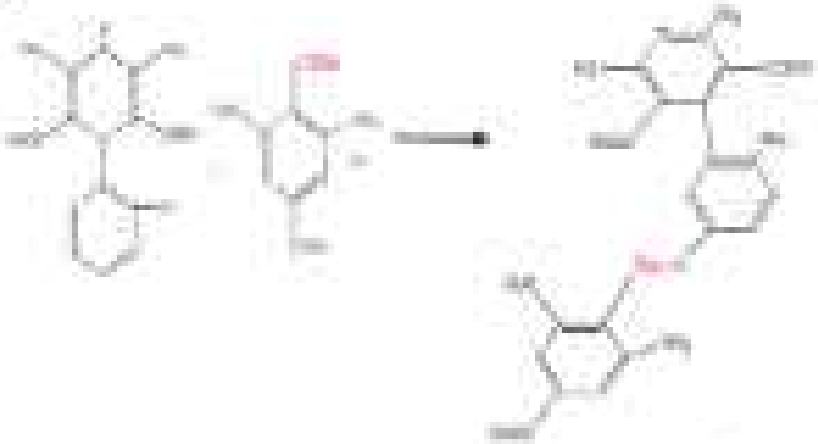
همچنین مرکب که پیوند گروه بنزیل داشته در یک تعادل یک مرحله‌ای گروه بنزیل از مرحله یک مرحله هیدروکلریک اسید (HCl) با اسیدیک اسید گلاکتیک تعویض شده گروه بنزیل بنزیل شده، یک مثال در همین مقاله به این مرحله همین مقدار تعیین (Nitrobenzyl) که مرحله Mitsuno و همکاران فرمیمه اسیدیک اسید گلاکتیک اضافه شده است می‌باشد شرح تعادل از مرجع



شکل (۲) ایجاد تعادل

در تعادل مولد DIBAL مطابق ایجاد گروه بنزیل به گروه اضافه حلال، گروه‌ها که نیز در مرحله یک مرحله‌ای تعادل است روی اپوکسید حداقل گروه بنزیل به گروه اضافه اکسیژن تعویض می‌باشد.

بعد از ایجاد گروه بنزیل به این طریق حلالیت نانو پروتئین افزایش و بعد از آنکاه با آنتی بادی ایمن (CD163) Anti-human CD163 monoclonal antibody (clone 10D6) مطابق شکل (۲) متصل از تعادل می‌گردد.



شکل(۲): شیمیگر دی‌ایزوسیانات تولوئین (TDI)

دیگر شیمیگر مهم در سنتز پلی‌یورتان‌ها، انواع [illegible] است که در این جدول انواع [illegible] جذب [illegible] دارد. از این [illegible] انواع [illegible] پلی‌ایزوسیانات [illegible] جذب آن [illegible] در [illegible] nm [illegible] جذب [illegible] در [illegible] nm [illegible] جذب [illegible] در [illegible] nm [illegible] جذب

جدول ۲. آنالیز خاکستر اندام مختلف نمونه‌های مطالعه (میانگین ± انحراف معیار ± خطای استاندارد) به روش رسمی آی‌او‌اس‌سی (AOAC)

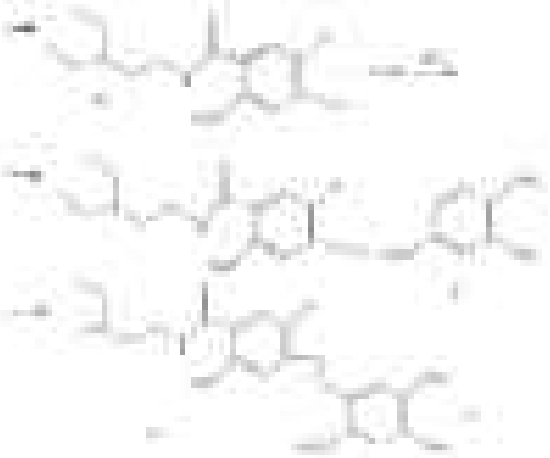
ردیف	نمونه گیاهی	میانگین ± انحراف معیار	میانگین ± خطای استاندارد
1	Fruits	۱۳.۳۳ ± ۰.۲۱	۱۳.۳۳ ± ۰.۱۲۱
2	Shoots	۱۲.۰۰ ± ۰.۴۰	۱۲.۰۰ ± ۰.۲۳
3	Stalks	۱۲.۰۰ ± ۰.۴۰	۱۲.۰۰ ± ۰.۲۳۱
4	Stalk	۱۰.۰۰ ± ۰.۲۰	۱۰.۰۰ ± ۰.۱۱۵
5	Hydrate	۹۳.۶۰ ± ۰.۲۰	۹۳.۶۰ ± ۰.۱۱۶
6	Stalk	۱۰.۰۰ ± ۰.۴۰	۱۰.۰۰ ± ۰.۲۳۱

نتایج رسمی برای تعیین خاکستر نشان می‌دهد ۱۳۳۳٪ در بافت گیاه این نمونه نظر به خاصیت نسبی پوست آن در کنترل فلزی کمتر آنالیزهای بافت و قسمت‌های میوه و حیوانات و مطالعات دیگر بافت برای آن وقت آن وقت برای بررسی‌های گیاهی آن و جمع‌آوری نمونه‌ها این میوه از جمله مواردی می‌باشد که استفاده از این سیستم‌ها و تجارب دیگر مطالعات و بررسی‌های انجام شده در روش همین روش است. آنالیز برای این جا مستقیم که از جمله microwave, chromatographic, mass spectrometry, molecular electrochemistry, biosensors, biosensors, flow injection analysis, and microfluidics هم آنالیز و آنالیز و الیسا و کمی رسمی و غیر مدیریت است و موجودیت مطالعات انجام شده این میوه دیگر نمونه‌ها مورد توجه و سر بر بافت خاص خیلی در حدود مطالعات گرفته شده در تجربه دیگر غیر از نمونه رسمی (AOAC) و تعیین خاکستر است که بخاطر چیدمان بر میوه یا نمونه دیگر تجارب خاص و میوه‌ها و خواص مهم آن استفاده شود.

استفاده از تکنیک‌های اپزیلیوم به صورت مستقیم: فرآیندهای که امین‌های اولی اپزیلیوم آبدار دارند:

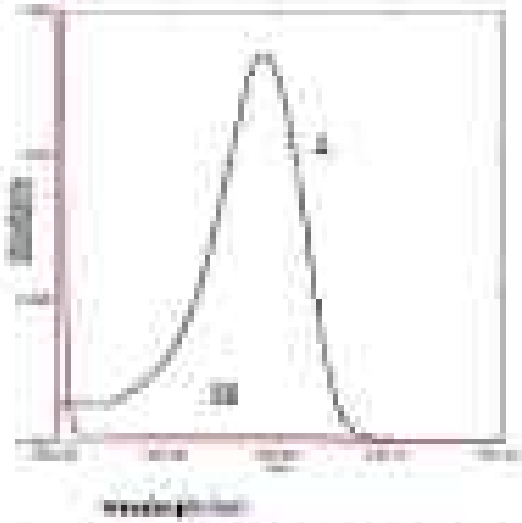
در این طریقه اشعه‌ها بر نظر جوشش دارای گروه‌های امین اولی اپزیلیوم است و بیشتر به کاهش عامل آنالیز (CO) و مستقیم میوه‌ها خواهد با یک موجودیت شیوه دقیق در آنالیز دارای این روش‌ها و مهارت‌ها جهت شیوه مطالعه وجود که در آن در عامل‌های اپزیلیوم استفاده می‌گردد. یک نظر از این طریقه‌های اپزیلیوم امین خاکستر برم آلوئین‌های که و روش Fenner و همکاران انجام شده است در بافت دیگر تحقیق برای انتخاب یک مهار مناسب جهت دارای اپزیلیوم نمونه‌های گلوتاریوم‌ها برای مهار مهم گرفته‌اند که از 1,5-difluoro-2,4-dinitrobenzene (DFDNB) به عنوان مهار جهت شیوه

[illegible]



شکل (۵): [illegible]

[illegible]



شکل (۱): ۱) جذب عنصر نیوکلئوپروتئین در ۱ پیش از افزودن ۲) جذب نیوکلئوپروتئین به تنهایی

بنابراین محاسبه و تعیین مقدار نیوکلئوپروتئین توسط ترسیم گرافی استفاده می‌باشد. نمودار مشخص از چهار (۴) یا پنج غلظت با تداخل می‌باشد. گرافی که از غلظت‌های 1ppm تا 10ppm رسم شده یک گرافی خطی می‌باشد. بعضی حاضر بدون اشکال مختلفی برای نیوکلئوپروتئین و تعیین مقدار آن وجود دارد. پس از انجام شده است که طریق آن از جدول (۲) آمده است.

نیوکلئوپروتئین که برای تعیین مقدار نیوکلئوپروتئین آمده دارای یک دیاگرام دیاگرامی یک آمده است. زمینه نیوکلئوپروتئین برای برای مواد جامد آزمایشگاهی برای خالی داشت. دیود اشباع فوتودیود الیاف‌سنج برای محلول‌های فیزیکی [۵] در صفحات سنج نیوکلئوپروتئین نظر نیوکلئوپروتئین و [illegible] تکنیک داشته شده است. اما بدون حاضر یک نیوکلئوپروتئین سریع پیوندی و مدت فیزیکی در جدول (۵) مشخص گردید. نیوکلئوپروتئین یک نیوکلئوپروتئین خالی برای جاگیری قابلیت نیوکلئوپروتئین. آزمایشگاه این نیوکلئوپروتئین نظر به نیوکلئوپروتئین تعیین آزمایش شده نیوکلئوپروتئین [illegible] قرار گرفته سریعی و آسان قابل اجرا می‌باشد. و همچنین و حساسیت آن با دیود پیشین قابل مقایسه [۶]

امروزه در تحقیقات مشتق دارویی و اندازه‌گیری پروتئین به صورت گسترده در تعیین مقدار ادویه‌ها و داروهای آزمایشگاه مشاهده شده. برای مشخص شدن نظر گرفته شده دارویی و داروهای مشخص از داده‌ها و صحت یک نمونه از جنس که با جزئی حاضر آزمایشگاه از نظر آسیب و استفاده از سنگ‌های خالی دارویی و پروتئین گرفته شده و تعیین مقدار بیگانه در نمونه‌ها نظر به سهولت و در اختیار بودن خواص و پیچیدگی جزء نظر در کاربردهای آن در آزمایشگاه و دارویی آن‌ها

[illegible]

[illegible]

No.	Drugs	Coupling reagent	Bases	Reaction (h)	Recovery (%)	Ref.
1	Cefotaxime	4-methylmorpholine	[illegible]	[illegible]	[illegible]	[31]
2	Hydrochloride salt	1,1'-Thiocarbonyldiimidazole	[illegible]	[illegible]	[illegible]	[32]
3	Tiaramide	N,N-dimethylacetamide, N-chlorosuccinimide, 5-sulfosalicylic acid	[illegible]	[illegible]	[illegible]	[33]
4	p-aminophenol	[illegible]	[illegible]	[illegible]	[illegible]	[37]
5	methyldopa	p-toluenesulfonic	[illegible]	[illegible]	[illegible]	[38]
6	methylhydrazinoacetate	N,N-dimethylacetamide, N-chlorosuccinimide, 5-sulfosalicylic acid	[illegible]	[illegible]	[illegible]	[39]
7	Rosuvastatin	Salicylanilic acid	[illegible]	[illegible]	[illegible]	[40]
8	Ofloxacin	Fructose	[illegible]	[illegible]	[illegible]	[41]
9	cefotaxime	2,2-DMDTU	[illegible]	[illegible]	[illegible]	[42]

نتیجه‌گیری

[illegible]

[illegible]

[illegible]

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[illegible]

Gender and psychological differences between men and women

AUTHOR:

Professor Mohammad Nadir Hilmi[1]

[1] Professor, Department of Psychology, Kabul University

Abstract: The purpose of this study is how the differences are, both biologically and psychologically, between men and women. Since psychology studies behavior, it studies this issue from a behavioral approach. Therefore, a specific aspect of individual differences is the behavioral differences between men and women, and these differences from is the necessary attention. Therefore, in this article, some biological differences between men and women have been mentioned, which makes family life easier by being aware of these differences.

Key words: gender, difference, gender differences, women, men

تفاوت های جنسیتی و روانی زنان و مردان

نویسنده:

دکتر علی

[illegible]

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چکیده

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مقدمه

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[illegible]

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[illegible]

اهداف تحقیق

اهداف کلی: دریافت [illegible] حسی در روایی داده و مولف

اهداف فرعی:

- [illegible]
- [illegible]
- [illegible]
- [illegible]

روش تحقیق

روش تحقیق این مطالعه به شیوه توصیفی و [illegible] است. این روش یکی از روش‌های تحقیق در علوم انسانی و اجتماعی می‌باشد. که برای بررسی و تحلیل تحولات و مطالعات انجام شده در یک حوزه تحقیقی به کار می‌رود.

تحولات حسی در میان نظریه‌های دانشمندان

دانشمندان در مورد [illegible] از نظر [illegible] بحث [illegible] به واقع [illegible] تحولات [illegible] در [illegible] که [illegible] می‌شود.

[illegible] به واقع [illegible] حسی و [illegible] [illegible] در [illegible] [illegible] در [illegible] [illegible] [illegible]

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نظریه بدایت‌گرایی اصفهانی نسبت به فلسفه‌های حسینی نظریه بدایت‌گرایی اصفهانی با طرح روش و قانون [illegible] بنیاد تحلیل می‌کند و جایگاه اصلی علت‌شناختی را به باشعور می‌دهد. در حوزه علت‌شناختی [illegible] حسینی بر اساس تمرکز [illegible] مهمی دارد. به اساس این نظریه بسیاری از مفهوم و گویه‌های مناسب با جنسیت خود حمل می‌کند زیرا که آن‌ها به [illegible] تعداد [illegible] بر حس گرایانه [illegible] شده [illegible] و برای [illegible] گرایانی [illegible] شده [illegible] و بسیار این نظریه [illegible] است که اصول [illegible] علت حمل اکتساب علت حسینی را [illegible] می‌کند. بنابراین [illegible] با [illegible] پایداری [illegible] می‌شود و [illegible] است که در حالی که [illegible] می‌گیرند و حس [illegible] می‌کنند در [illegible] بر [illegible] است تا [illegible] و [illegible] اصول [illegible] اصول [illegible] و [illegible] آن [illegible] [illegible] و [illegible] حمل [illegible]

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[illegible] بیولوژیکی باکتری و درمان:

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نتیجه‌گیری

[illegible]

[illegible] بازنگری اجتماعی وجود تفاوت زمانی نیاز است. [illegible] و [illegible] اجتماعی [illegible] و [illegible] دلیل آن [illegible] نمی‌کند.

در مطالعات [illegible] آزمون [illegible] نظریه‌های [illegible] پیشین در نظریه‌ها [illegible] نظریه‌های [illegible] پژوهش‌های قابل [illegible] است. [illegible] دیگر [illegible] نظریه‌ها [illegible] در [illegible] و دیگر [illegible] نظریه‌ها [illegible] در [illegible] سازمان [illegible] آسیای [illegible] سازمان [illegible] سازمان [illegible] است.

منابع

۱. [illegible] (۱۳۸۱). [illegible] اجتماعی و [illegible] در [illegible] اجتماعی [illegible] (۲۶-۳۰).

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۳. [illegible] (۱۳۹۷). [illegible] اجتماعی [illegible] (۲۰۱-۲۰۶).

۴. [illegible] (۱۳۹۹). [illegible] در [illegible] (۷۵-۸۰).

۵. [illegible] (۱۳۹۵). [illegible] [illegible].

۶. [illegible] (۱۳۹۵). [illegible] [illegible].

۷. [illegible] (۱۳۹۶). [illegible] [illegible].

۸. [illegible] (۱۳۹۴). [illegible] [illegible].

۹. [illegible] (۱۳۹۱). [illegible] [illegible].

۱۰. [illegible] (۱۳۸۱). [illegible] [illegible].

۱۱. [illegible] (۱۳۹۱). [illegible] [illegible].

The role of bioinformatics in modern pharmacology

Author:

Nour Hasan

Lecturer, faculty of pharmacy, Tishk Institute University

Abstract:

In addition to expediting the identification of therapeutic targets and the screening and improvement of drug candidates, bioinformatic analysis may also help diminish adverse effects and interrupt drug resistance. Methods for novel drug discovery and repurposing have benefited greatly from the large-scale collection of high-throughput data, including genomic, epigenetic, genome architecture, ncRNA, transcriptomic, proteomic, and phenotypic profiling data. More accurate protein-ligand docking experiments and more insightful virtual screening were made possible by the accumulation of protein and RNA structures, the development of homology modeling and protein structure prediction, and the availability of large structure databases of small molecules and metabolites. I introduce the conceptual framework that underpins the collection of high-throughput data, summarize the utility and potential of data mining in drug discovery, delineate several inherent limitations in data and software mining purpose-built methods to enhance the analysis of these diverse data types, and emphasize commonly utilized software and databases pertinent to drug discovery.

Key words: Bioinformatics | Drug design | Drug repurposing | pharmacology

نقش بیوالکتروشیمی در نوآوری‌های مدرن

نویسنده:
حسن بهاری
پیچیدگی مهندسی
پیچیدگی زیست‌محیطی

[illegible]

[illegible]

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مقدمه

[illegible]

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الف. [illegible] و [illegible] [illegible]

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[1] [illegible]

[2] [illegible]

۲. تحلیل داده‌های اکتشافی

[illegible]

۵. استفاده از بانک‌های اختصاصی RNA پروتئین‌ها

[illegible]

- **NetBind**: برای [illegible] در پروتئین‌ها [illegible] که [illegible] در [illegible] (NCBI) [illegible] می‌کند[۳۲].
- **BindPred**: [illegible] که [illegible] و [illegible] را [illegible] می‌کند[۳۳].
- **Protein Data Bank (PDB)**: [illegible] که [illegible] را [illegible] می‌کند[۳۴].
- **DNA Data Bank of Japan (DDBJ)**: [illegible] که [illegible] را [illegible] می‌کند[۳۵].
- **PocketQ**: [illegible] که [illegible] را [illegible] می‌کند[۳۶].

۶. شبیه‌سازی دینامیک مالیکولی

[illegible]

- **بررسی [illegible]**: [illegible] و [illegible] [illegible] را [illegible] می‌کند[۳۷].

[illegible] National Center for Biotechnology Information
[illegible] www.ncbi.nlm.nih.gov

- **پیش‌بینی رفتار نوفه:** استفاده از شبیه‌سازی مونت‌کارلو برای پیش‌بینی سناریوهای نویز و ارزیابی حاشیه خطا. برای این مطالعه، برای توسعه‌دهندگان دارای دانش بالا و هوش مصنوعی کمتر مناسب است [۱۹].
- **کاهش حجم:** استفاده از شبیه‌ساز مونت‌کارلو می‌تواند در فرآیند آزمون سخت‌افزار (تراشه) نویز مورد استفاده قرار گیرد. این روش به مهندسان اجازه می‌دهد تا دقت و کارایی را به حداکثر برسانند و هزینه‌های تولید را کاهش دهند [۲۲].
- **تحلیل حاشیه خطا:** در فرآیند تولید نیمه‌رساناها، تغییرات جزئی در فرآیند تولید می‌تواند منجر به خطاهای جدی شود. شبیه‌ساز مونت‌کارلو به مهندسان کمک می‌کند تا این خطاها را پیش‌بینی و تأثیر آن‌ها را کاهش دهند [۲۳].
- **مطالعه تغییرات ساختاری نیمه‌رساناها:** شبیه‌سازی مونت‌کارلو می‌تواند تغییرات ساختاری نیمه‌رساناها را در مقیاس با اتصال مشکل‌دار بررسی کند. این مطالعات می‌تواند به شناسایی مکانیزم‌های جدید برای کاهش نوفه و بهبود تأثیر نویز کمک کند [۱].
- **پیش‌بینی نوفه حرارتی:** استفاده از شبیه‌سازی مونت‌کارلو می‌تواند تأثیر حرارتی محیط را بر نویز پیش‌بینی کند. این مطالعات می‌تواند به طراحی سیستم‌های خنک‌کننده کارآمد کمک کند [۱].
- **تحلیل سیگنال‌های اختلال مستقل:** شبیه‌سازی مونت‌کارلو می‌تواند در تحلیل سیگنال‌های اختلال پیچیده که در محیط‌های واقعی ایجاد می‌شوند، مورد استفاده قرار گیرد. این مطالعات می‌تواند به درک بهتر تأثیر نویز در سیستم‌های مخابراتی و پردازش داده‌ها کمک کند [۱۸].
- **بهینه‌سازی الگوریتم‌های نویز:** شبیه‌سازی مونت‌کارلو می‌تواند در بهینه‌سازی الگوریتم‌های نویز و پردازش سیگنال‌های دیجیتال مورد استفاده قرار گیرد. این مطالعات می‌تواند به توسعه الگوریتم‌های کارآمدتر برای کاهش نویز کمک کند [۲۱].

این کاربردها نشان می‌دهند که شبیه‌سازی مونت‌کارلو ابزار قدرتمندی در فرآیند طراحی و توسعه مدارهای نیمه‌رسانا است و می‌تواند به بهبود کیفیت و کارایی آن‌ها کمک کند.

چالش‌ها و محدودیت‌ها در ساخت نیمه‌رساناهای جدید

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جدول ۲۰- مراحل و کاربرد هاش مهاجرت‌های در حالت دوطرفه جمعیت

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مطالب و محتویات های پروژه پیشنهاد در ادبیات خارجی

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Vitamin B12 and B9 deficiency in relation to increased homocysteine

Authors:

Assistant Professor Gholam Rasool "Tamer Hassan"

Lecturer, Department of Clinical Pharmacy, Faculty of Pharmacy, Hawler Medical University of Higher Education

Abstract: Stroke is the third leading cause of death in the world and is also the largest cause of long-term disability. The most important strategy to reduce this disease is prevention, which depends on identifying and controlling all causes and modifiable risk factors.

One of the emerging risk factors is reducing plasma homocysteine levels, which is achieved by taking adequate sources of vitamins B12 and B9. In this study, the role of the above vitamins in reducing plasma homocysteine levels has been investigated, in which atherosclerosis can play a primary role.

Keywords: Stroke, Homocysteine, Vitamin B12 and B9

کمبود ویتامین های B12 و B9 در رابطه با افزایش هموسیستئین

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چکیده

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[illegible] هموسیستئین [illegible] ویتامین های B12 و B9 [illegible]

هموسیستئین [illegible] ویتامین های B12, B9 [illegible]

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[illegible] ویتامین های B12, B9 [illegible]

کلمات کلیدی: [illegible] هموسیستئین، ویتامین های B12 و B9

مقدمه

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مواد و روش کار

این بخش شامل مطالعه ای مروری که با استفاده از کتاب های معتبر علمی، مقالات تحقیقی صورت گرفته است.

ویتامین B12

از جمله ویتامین های محلول در آب و ماده ای در به گیاهان ساخته نشده و تنها توسط ارگانیسم های حیوانی تشکیل می شود.

منابع غذایی ویتامین B12

غذاهای حیوانی مثل گوشت، جگر، سفیده تخم مرغ و منابع دیگر ویتامین B12 را به وجود می آورند.

جذب

ارگان ها و اندام های مختلف منابع غذایی ویتامین B12 را جذب می کنند.

اگر ویتامین B12 برای جذب به عوامل پروتئینی و اسیدهای آمینه ای خاص یا جذب کننده های دیگر و به اندام های دیگر وابسته باشد، آنها نیز جذب می شوند.

جذب ویتامین B12

- برای جذب ویتامین B12 نیاز به اسید می باشد.
- اندام پرسیل و آلیاژ است.

شکل ۲: مسیر جذب ویتامین B12 در بدن

www.mohammadi-lab.com
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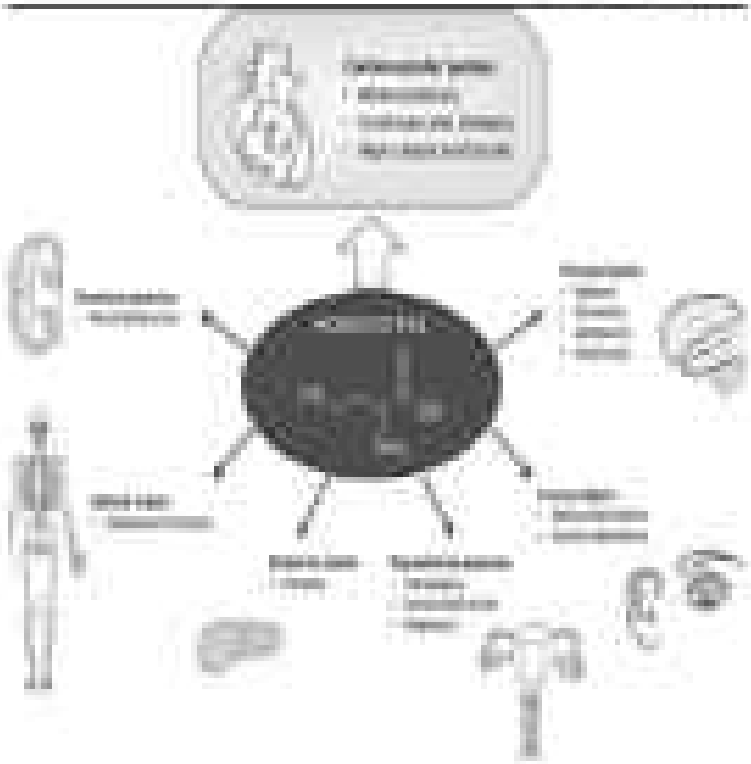
رابطه رادیوم و سلامتی



شکل ۵: [illegible]

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برای مقایسه پیامدهای [illegible] دقیق، داده‌هایی که به سطح تحصیلات مقایسه‌پذیر و معنادار می‌شوند، نیاز است. گسترش مراقبت مبتنی بر جامعه، نقش پررنگ‌تری در آموزش افراد و حفظ سلامت جامعه ایفا می‌کند. با توجه به اهمیت این پیامدها، گردآوری پیامدهای مالی طول در استطاعت پیامدهای اجتماعی‌ـ‌اقتصادی بازتوجه که در حال و پیامدهای مالی افراد، امری بالاترین اهمیت‌ستی قابل‌ذکر می‌باشد.

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Authors:

Assistant Professor Bernulian Hedery

Lecturer, Department of Industrial Pharmacy, Faculty of Pharmacy, Semarang Sultan Agung Institute of Higher Education

Abstract: Cancer is recognized as one of the major health problems worldwide. According to official statistics from the World Health Organization, cancer is one of the most important causes of death worldwide, and due to the increasing number of farmers, the risk of cancer is increasing. Cancer treatment and control has always been a serious challenge for researchers and health workers. In recent research, targeted drug delivery systems for cancer treatment have been investigated, which have created a new revolution in the field of cancer treatment. Targeted drug delivery systems for cancer treatment route drug delivery to a specific site to cancer cells and prevent drug delivery to normal cells. Antineoplastic drugs kill these cells by blocking signals that play a role in tumor growth and blocking the blood supply to the cancerous environment. This delivery method has many advantages, including increased effectiveness, reduced side effects, increased therapeutic safety, and reduced frequency of drug use. The most important cancer treatment strategies are passive and active delivery systems. Among the most important active systems are the use of monoclonal antibodies in cancer treatment, folic acid derivatives as a specific receptor in cancer treatment, and aptamers to target cancer cells. The physical changes that occur in cancer cells can play a significant role in delivering drugs to the site. This article reviews the targeted drug delivery system in cancer treatment and discusses new developments in this area.

Keywords: Targeted delivery system, cancer treatment, active targeted delivery system, passive targeted delivery system

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پیشینه

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مقدمه

سرطان سالانه از عامل مهم مرگ و میر [illegible] است. براساس آخرین بررسی سازمان جهانی جهان در سال ۲۰۲۱ [illegible] ۹ میلیون نفر [illegible] ۲۰ میلیون نفر به سرطان مبتلا شده [illegible] سرطان [illegible] سرطان [illegible] در [illegible] سرطان [illegible] سرطان [illegible] در [illegible] سرطان [illegible] در [illegible] ۱۲ [illegible] در جهان به علت سرطان به مرگ می‌انجامد. در گزارش [illegible] آخر [illegible] سرطان به [illegible] آخرین بررسی سازمان جهانی جهان [illegible] (۱)

به [illegible] سازمان جهانی جهان [illegible] ۲۰۲۰ [illegible] ۹۹ [illegible] ۹۹ [illegible] ۲۰۲۰ [illegible] سرطان [illegible] جهان [illegible] از [illegible] سرطان [illegible] فناوری‌های [illegible] و [illegible] اقتصادی [illegible] فناوری و [illegible] حاضر از [illegible] فناوری‌های [illegible] سرطان در جهان [illegible] ۹ [illegible] مرگ و میر سرطان [illegible] از سرطان در سال ۲۰۲۹ [illegible] آخر [illegible] سازمان جهانی جهان [illegible] (۲)

[illegible] سرطان از [illegible] مهم [illegible] است که با پیشرفت [illegible] سرطان و [illegible] سرطان [illegible] سرطان [illegible] در [illegible] سرطان [illegible]

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سیستم تحویل غذایی هدفمند برای مددجویان سرطانی

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سیستم هورمونی انسانی در حال

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تحلیل موضعی لوله با قطر متغیر

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سیستم هدفمند تحویل دهی دوا با استفاده از حسگرهای RFID

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سیستم هدفمند تحویل دهی دوا با حسگرهای RFID

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سیستم هدفمند تحویل دهی دوا به وسیله کوادکوپتر

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سیستم هدفمند تحویل دهی دوا به کمک هواشناسی

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[illegible] تحویل ذهنی هدف فعل دوم برای کنترل رسانه‌ای

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[illegible] تحویل ذهنی هدف فعل دوم استفاده از آن برای هدف دوم فعل

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تصویر شماره (۲) [illegible]

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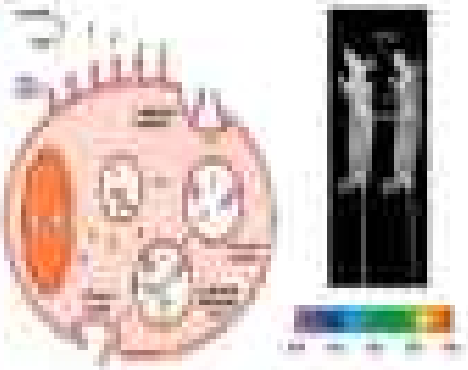
سیستم تحویل دهی هدفمند برای سرطان با استفاده از آنتی‌بادی‌های نانوذرات اسید نوکلئیک



تصویر شماره (۳) استفاده از آنتی‌بادی‌های هدفمند جهت روش تحویل دهی نانوذرات سرطانی

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نتیجه‌گیری

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منابع

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Author:

Prof. Lawal Bello Ja'afaru

Professor, Faculty of Islamic Studies, Kano University of Education

Although, We have always heard about the spiritual benefits of prayer, but recently, Muslim and non Muslim researchers and scientists have revealed the secrets of the health values of prayer. The truth is that prayer is a spiritual and physical school of meditation. Which causes mental concentration, calms the nerves, and ultimately causes the health and well-being of the praying person. No matter by prayer, the material, spiritual, mental, and intellectual happiness of the praying person is sought to, with mentioning that every scientific research article has its own special scientific importance and value. The scientific research article which is prepared and written under the title Investigation of the Scientific Benefits and Values of Prayer, deserves importance because a number of Muslims, based on their level of awareness of the health values of prayer, culturally consider prayer to be an act of worship and worship is their thoughts, which according to the values and orientations, prayer, in addition to its worship aspects, has health and hygienic aspects. Regardless of everything, prayer is the physical act of the prayer that is: A exercise is beneficial for health, it purified water is necessary for many forms, it clean air in the environment is necessary for everyone, prayer is also necessary and essential for the health of the human body and mind. It's prayer indicates to have a day in a worship and prayer. So, such a purified and beneficial spiritual elements are supplied from the heaven and through prayer. On this basis, I considered myself obliged to solve the problem. Therefore, my of assessment of the health and hygienic values of prayer based on the following proposed goals: Mentioning the latest new medical research regarding the health benefits and values of prayer; Understanding how the health and medical benefits and values of prayer are used to treat both body parts; Understanding how to prevent modern and the other mental and psychological ailments for prayer students. I will present my scientific research under the title of the health benefits and values of prayer. Research and study of the health benefits and values of prayer, in terms of the problem and goals, is carried out using an analytical and descriptive method, in which the content related to the subject is considered, examined, analyzed, and described. This is a library method, in which theories and perspectives related to the subject are collected from books and reliable scientific sources.

Keywords: Benefits, value, health, prayer

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[illegible]

الحمد لله و كفى و سلام على عباده الذين اصطفى [illegible]

[illegible] **وأصلحوا بينهما فإن بغت إحداهما على الأخرى** [illegible]

[illegible] **الله صلى الله عليه وسلم يقول** [illegible] **الخلق عيال الله فأحب الخلق إلى الله من أحسن إلى عياله** [illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible] **إِنِّي لَا أَقْدِرُ إِلَّا نَفْسِي وَأَخِي فَافْرُقْ بَيْنَنَا وَبَيْنَ الْقَوْمِ الْفَاسِقِينَ** (المائدة: ٢٥) [illegible]

[illegible] **وَإِذْ قَالَ رَبُّكَ لِلْمَلَائِكَةِ إِنِّي جَاعِلٌ فِي الْأَرْضِ خَلِيفَةً قَالُوا أَتَجْعَلُ فِيهَا مَنْ يُفْسِدُ فِيهَا وَيَسْفِكُ الدِّمَاءَ وَنَحْنُ نُسَبِّحُ بِحَمْدِكَ وَنُقَدِّسُ لَكَ قَالَ إِنِّي أَعْلَمُ مَا لَا تَعْلَمُونَ** (البقرة: ٣٠) [illegible]

[illegible] **وَلَا تَقْفُ مَا لَيْسَ لَكَ بِهِ عِلْمٌ إِنَّ السَّمْعَ وَالْبَصَرَ وَالْفُؤَادَ كُلُّ أُولَٰئِكَ كَانَ عَنْهُ مَسْئُولًا** (الإسراء: ٣٦) [illegible]

[illegible] **وَلَا تَكْتُمُوا الشَّهَادَةَ وَمَنْ يَكْتُمْهَا فَإِنَّهُ آثِمٌ قَلْبُهُ وَاللَّهُ بِمَا تَعْمَلُونَ عَلِيمٌ** (البقرة: ٢٨٣) [illegible]

[illegible] **وَلَا تَلْبِسُوا الْحَقَّ بِالْبَاطِلِ وَتَكْتُمُوا الْحَقَّ وَأَنْتُمْ تَعْلَمُونَ** (البقرة: ٤٢) [illegible]

[illegible] **وَلَا تَكْتُمُونَهُ فَنَبَذُوهُ وَرَاءَ ظُهُورِهِمْ وَاشْتَرَوْا بِهِ ثَمَنًا قَلِيلًا فَبِئْسَ مَا يَشْتَرُونَ** (آل عمران: ١٨٧) [illegible]

[illegible] **وَلَا تَلْبِسُوا الْحَقَّ بِالْبَاطِلِ وَتَكْتُمُوا الْحَقَّ وَأَنْتُمْ تَعْلَمُونَ** (البقرة: ٤٢) [illegible]

[illegible] **إِنَّ الَّذِينَ يَكْتُمُونَ مَا أَنْزَلَ اللَّهُ مِنَ الْكِتَابِ وَيَشْتَرُونَ بِهِ ثَمَنًا قَلِيلًا أُولَٰئِكَ مَا يَأْكُلُونَ فِي بُطُونِهِمْ إِلَّا النَّارَ وَلَا يُكَلِّمُهُمُ اللَّهُ يَوْمَ الْقِيَامَةِ وَلَا يُزَكِّيهِمْ وَلَهُمْ عَذَابٌ أَلِيمٌ** (البقرة: ١٧٤) [illegible]

[illegible] **وَلَا تَكْتُمُونَهُ فَنَبَذُوهُ وَرَاءَ ظُهُورِهِمْ وَاشْتَرَوْا بِهِ ثَمَنًا قَلِيلًا فَبِئْسَ مَا يَشْتَرُونَ** (آل عمران: ١٨٧

[illegible]

[illegible] **اهل في الصلاح**: [illegible]

[illegible]

[illegible] **عن الله عنه قال: قال رسول الله صلى الله عليه وسلم: شربوا ألبانكم واصلاح وهو أبا: صلح بعضي لا تعرفوهم غلبوا وهو أبا: غلب وقالوا يعرفون في الصلاح**" رواه البيهقي [illegible]

[illegible]

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[illegible]

[illegible]

[illegible] **قد أفلح المؤمنون الذين هم في صلاتهم خاشعون** (المؤمنون: ۱-۲) [illegible]

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فهرست مراجع و مآخذ

۱. قرآن کریم.

۲. [illegible] (۱۳۹۱) [illegible] قم: انتشارات [illegible].

۳. ابن جامع، [illegible] (۱۴۰۵) [illegible] بیروت: دار الکتاب العربی، الطبعة الأولی.

۴. الحلی، [illegible] (۱۳۹۵) [illegible] بیروت: دار الکتب العلمیة.

۵. [illegible] (۱۳۹۷) [illegible] ج ۶، [illegible] دار الکتب الإسلامیة.

۶. [illegible] (۱۳۹۷) [illegible] تهران: [illegible].

۷. [illegible] (۱۳۹۴) [illegible] قم: [illegible].

۸. [illegible] (۱۳۹۲) [illegible] بیروت: [illegible].

۹. [illegible] (۱۳۹۴) [illegible] ج ۱، [illegible] قم: انتشارات [illegible].

۱۰. [illegible] (۱۳۹۶) [illegible] قم: انتشارات [illegible].

۱۱. [illegible] (۱۳۹۲) [illegible] قم: انتشارات [illegible].

۱۲. [illegible] (۱۳۹۴) [illegible] قم: [illegible].

۱۳. [illegible] (۱۳۹۴) [illegible] قم: [illegible].

۱۴. [illegible] (۱۳۹۴) [illegible] بیروت: [illegible].

۱۵. [illegible] (۱۳۹۴) [illegible] تهران: انتشارات [illegible].

[illegible]

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Clinical Report on an Implant-Supported Overdenture in a Parkinson's Patient

Authors:

Tamim Sediqi[1], Elaha Sediqi, Ghafar[2], Sediqullah Nikzad[3], Omid Rasuli[4], Rozita Sediqi[5], Hafiz-ullah Ehsan[6]

[1]Research Department, Queen Mary University of London, London, UK;

[2]Department of Periodontology, Kabul University of Medical Sciences, Kabul, Afghanistan;

[3]Department of Prosthodontics, Ibn-Sina University of Medical Sciences, Ibn-Sina Medical Department, Nangarhar Institute of Higher Education, Kabul, Afghanistan; [4]Medical Sciences Education Center, Ghazi University, Kabul, Afghanistan

Abstract: Speaking, chewing and swallowing difficulties are usually first Parkinson's disease (PD), which frequently affects the oro-pharyngeal muscles. The reduction in food and hydration intake that is unavoidable leads to a worsening of neurological symptoms. Patients with Parkinson's disease experience significant challenges when adjusting to wearing entire dentures. Each of these problems presents a considerable challenge for the dentist in terms of prosthodontic rehabilitation. This case study describes how a patient with Parkinson's disease was able to acquire functional mandibular partial dentures supported by implants to replace both their full and partial set of missing teeth. A multi-scale prosthesis will help the patient with their psychological, functional, and aesthetic requirements.

Keywords: Parkinson's disease, dentistry, implants, jaw relation.

Introduction

In 1817, James Parkinson laid the foundation for the understanding of Parkinson's disease (PD), a distinct movement disorder, in his essay "Essay on the Shaking Palsy."[1] Emerging typically in the 50s in both decade of life, PD stands as the second most prevalent neurodegenerative disease of the central nervous system, with an incidence rate ranging from 1% to 2%. Notably, males exhibit a higher susceptibility than females.[2–4] While the majority of PD cases lack an unknown etiology, recent investigations point toward genetics as a potential risk factor.[5] Genetic factors contribute to over 2% of affected patients, with monogenetic causes accounting for 1%–10%, although their exact mechanisms remain uncertain.[6] In addition to genetic factors, environmental influences such as alcohol consumption, smoking, vitamin D exposure, and urate levels further contribute to the overall risk of PD.[7–9] PD is characterized by a gradual or persistent loss of dopamine-producing brain cells in the substantia nigra,[10] resulting in a spectrum of motor and non-motor symptoms.[11] Motor symptoms encompass tremor, bradykinesia, stiffness, and postural instability—the four cardinal symptoms. Non-motor symptoms extend to sleep disorders, GI/GU, olfactory disorders, and autonomic nervous system irregularities, including orthostatic hypotension, cardiac arrhythmia, vessel dysfunction, excessive perspiration, and dysfunctional micturition. Behavioral symptoms such as depression, psychosis, and dementia often lead to the neglect of oral health and a decrease in dental appointments.[12,13] Various medical manifestations arise from some symptoms, including temporomandibular dysfunction, tremors in the forehead, eyelids, lips, and tongue musculature, reduced blink rate, chewing problems, and a mask-like face due to a lack of facial expression.[14,15] PD pain impacts both automatic and voluntary movements.[12] Oral dysphagia is commonly observed due to pharyngeal motor deficits,[8,15–4] often leading to weight loss and a diminished quality of life.[8] Individuals with PD face multiple oral health challenges, including [illegible] salivation, periodontal, burning mouth syndrome, poor oral hygiene, and denture-related issues. The pain voluntary and involuntary nature of medical- pharmacist sensitive medications contribute to dysphagia, malaise in the mouth and throat, and challenges in maintaining proper oral hygiene and maintenance.[15–17] Treatment options for PD patients encompass medications, with levodopa being the most widely used. Anticholinergic medications are also employed. Though long-term medication use often leads to partial complications in 50–77% of cases,[18] the alternative treatment is deep brain stimulation surgery.[19] Moreover, patients on medication often report experiencing oral health issues like salivation, bruxismus, burning mouth, and even oral lichen planus.[20] Weight loss resulting from

these symptoms can further impair the patient's quality of life, particularly in cases involving denture stomatitis or angular cheilitis (Figure 2).[12,13] In addressing the unique challenges posed by PD, effective dental care necessitates a multidisciplinary approach.[14] Rehabilitation options range from removable dental prosthesis to dental implants, despite a slightly lower success rate in PD patients. The preference for dental implants in planning for dentures signifies a critical advancement in treatment modalities.[15] Comparative analysis reveals the varied benefits of mandibular implant overdentures over traditional full mandibular dentures, with increased stability ensuring improved functionality during speech and mastication.[16] Recent case studies highlight the transformative impact of mandibular implant support, underscoring improvements in psychological well-being, speech, and masticatory efficiency—a crucial step towards enhancing overall nutritional status for PD patients. In assessing the impact of implant-supported dentures on Parkinson's patients, evaluating psychological well-being, speech, and masticatory efficiency is crucial. Psychological well-being can be assessed using standardized scales such as the Parkinson's Disease Questionnaire (PDQ-39) or the Geriatric Depression Scale (GDS), which measure mood, quality of life, and depressive symptoms. Speech intelligibility can be evaluated through speech pathology assessments, including the Frenchay Dysarthria Assessment (FDA) or the Unified Parkinson's Disease Rating Scale (UPDRS). Masticatory efficiency, which is essential for adequate nutrition and overall health, can be objectively measured using tools like the Optimastic Chewing Gum Test or masticatory performance assessments. Understanding how these parameters are affected and improved by implant-supported dentures in Parkinson's patients contributes to comprehensive care and better treatment outcomes.[14–16] Unfortunately, not all patients, particularly those with PD, can successfully acquire the control necessary for full denture functionality. The advent of Onlay integrated implants has revolutionized oral-only health overdentures, offering a groundbreaking solution that significantly reduces challenges associated with traditional dentures.[1,16,17] In conclusion, the evolving landscape of dental care for PD patients emphasizes a comprehensive, multidisciplinary approach. Advancements, ranging from innovative dental prosthetics to dental implants and the transformative potential of mandibular implant overdentures, are paving the way for an improved quality of life. The development of Onlay integrated implants stands as a testament to the ongoing commitment to overcoming the challenges faced by these individuals, bringing hope and innovation to the realm of dental health in the context of Parkinson's disease.[1,16,17] Case Report The history of dental implants dominant in a vast that spans centuries. Evidence suggests that ancient civilizations like the Mayans and Egyptians experimented with implant-like

treatment method, bone substitutes such as ivory and shells to replace missing teeth.[1] Moreover, the foundations of modern implantology were laid in the 20th century. The landmark statement in modern implantology is attributed to Dr. Per Ingvar Brånemark, a Swedish orthopedic surgeon who, in the 1970s, discovered osseointegration while studying blood flow in rabbit bones.[2] This discovery paved the way for the development of titanium dental implants, capable of integrating with the jawbone, providing a sturdy base for artificial teeth.[3] Initially, dental implants were predominantly placed by oral surgeons or periodontists, specialists in gum disease.[4] However, as implantology progressed, general dentists also began incorporating implant placement into their practices, sometimes after specialized training.[5] The timing of dental implant placement varies depending on the patient's oral health and treatment plan. In cases where patients require tooth replacement due to conditions like periodontal disease, implants may be considered as an alternative to partial dentures.[6] Whether implants are placed before or after the diagnosis of Parkinson's disease is a nuanced decision, dependent on individual patient needs and circumstances.[7,8,9] A compelling case emerged in our prosthodontics department at Tehran University of Medical Sciences, School of Dentistry, involving an 81-year-old female patient with Parkinson's disease seeking prosthetic rehabilitation. The patient presented with a broken mandibular implant-supported prosthesis and a worn maxillary complete denture (Figure 1). While a 14-year medical history of Parkinson's disease, the patient was on a medication regimen consisting of Levodopa 100 mg and carbidopa 25 mg. Upon oral examination, distinct clinical features were observed, including soft and asymmetrical speech, reduced eye blinking, a subtle trembling of the mandible, and limited lip movement during conversation. The intraoral examination revealed reduced salivary flow, well-rounded residual ridges, a deep palatal vault, a type III edentulous palate (Kennedy), and two worn Brånemark bar attachments on the mandible (Figure 2A and B). Moreover, radiographic observations did not reveal any temporomandibular joint (TMJ) pathology (Figure 3A and B). The treatment plan was meticulously crafted, emphasizing the benefits of an implant-retained prosthesis.

Figure 1: Patient profile

Figure 2: (A and B) – Maxillary Residual Ridges and Mandible With Two Transmucosal (Two Threaded) Implants

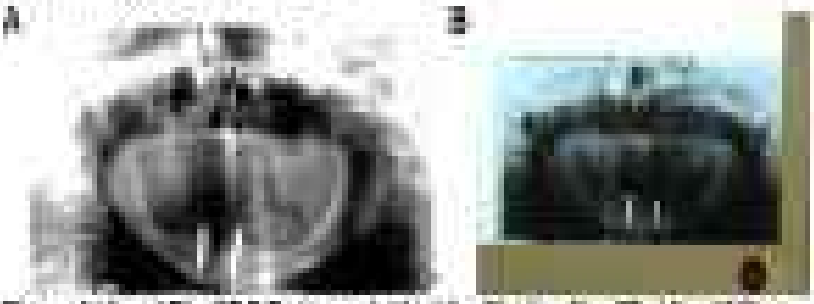
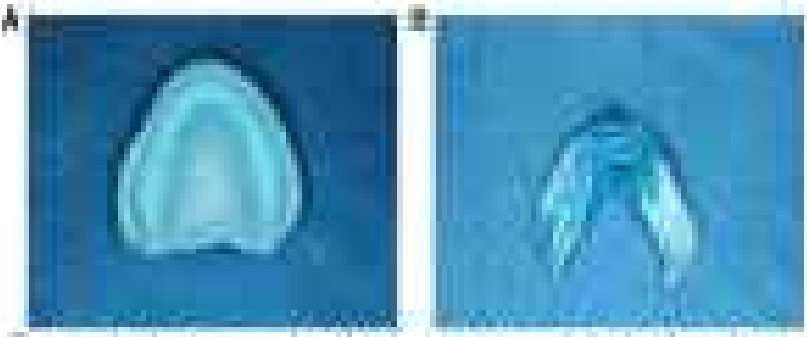


Figure 3: (A and B) – OPG Radiograph (A) After Fitting Clip (B) After 1 Year

Given the patient's medical condition, specific procedures were taken, including advising the patient to stop her Parkinson's disease medication as hence

Before the root and showing an occlusal function in patients already suffering and inconsistence. To have a comprehensive and supportive environment, each 45-minute modeling appointment prioritized the patient's comfort and minimized anxiety and frustration. Additionally, a dental chair with a 45 degree tilt was employed to facilitate overbending. The prosthodontic process commenced with the creation of a primary impression using irreversible hydrocolloid. Subsequently, a custom tray, made from non-polymerizing acrylic, The selective pressure impression method, incorporating a spacer in the anterior and selective pressure at the posterior, was employed. Impressions were spliced with each other after taking impressions. Bite jaw modeling was accomplished through an orchestrated process using modeling plastic impression compound, while the final secondary impression utilized rigid resin and elastomer-free impression material for the maxilla and posterior mandible (Clinical Outline). The anterior portion of the mandible received Panasil Initial Contact Light (KETTENBACH), a light-body polyvinylsiloxane impression material (Figure 4A and B). Before the clinical jaw relation recording, the patient practiced mandibular movement, which Aramany noted is capturing the strong occlusion with a slightly lower vertical height than usual (Figure 5).

Figure 4 (A and B) - Final Impression Of Maxilla And Mandible



The recorded data was transferred to the articulator with the face bowed, and horizontal jaw relation was established through a trialand manipulative technique. Artificial teeth, aligned with established occlusion in the recent past, were positioned, and a final Aesthetic Try-in and jaw relation verification. Two subsequent appointments were dedicated to eliminating occlusal interferences (Figure 6). Following the pretty bites, a GC (Gold Hue) ™ FIXO denture was chosen, and the mandibular orchestrator's metal frame was tested with teeth. The final denture was fabricated using high-impact

Figure 6 Cosmetic Evaluation And Patient Smile

Figure 6 Teeth Try-In

Figure 7 Metal Framework With Base Record Of Mandible

Anterior bite block (ABB), which is made of 2D N applied to the Hawley's plate (HP) [illegible] (Figures 7 and 8). Following the ABB, [illegible] were scheduled to evaluate occlusion, size and stability and potential anterior relapse (Figure 9). Remarkably, improvements in speech were evident in the first follow-up, occurring 24 hours after delivery, and continued progress was observed at subsequent intervals (3 days, 1 week, 1 month, 3 months, and 5 months). Notably, the patient

Figure 6 Anterior Tong.

Figure 8 Final Over Correct Adjustment

Figure 10 Patient Satisfaction.

improved retention with enhanced chewing ability (Figure 10). This case exemplifies the successful execution of an implant-retained prosthesis tailored to the unique challenges posed by Parkinson's disease, highlighting the importance of a comprehensive and patient-centric approach in prosthodontic.

Discussion

Parkinson's disease, characterized by progressive neurodegeneration, manifests through distinct motor symptoms such as resting tremors, stiffness, and postural instability, alongside various non-motor factors like cognitive-type rigidity and facial impairments.[1] As the global elderly population burgeons, geriatric healthcare becomes paramount importance, with dentists playing a pivotal role in enhancing the quality of life for seniors.[2] Patients with Parkinson's disease encounter a spectrum of motor and non-motor complications, adversely impacting their oral health, daily life, and facial expression. The use of medications contributes to oral complications, often leading to premature tooth loss, prompting a need for oral rehabilitation.[3,4] Implant-supported prosthetics, such as CD-1 prosthetics, emerge as a viable option, exhibiting superior masticatory efficiency compared to traditional complete dentures. This prosthesis is particularly suitable for patients experiencing issues with traditional mandibular dentures, ensuring enhanced retention without accrual wounds.[5] Because Parkinson's patients have increased tremors, increased salivation, decreased adaptation skills, and reduced muscle control, creating impressions and accurately jaw relationships can be difficult for dentists working with these

patients [4,13]. Patients may find it challenging to maintain oral hygiene from dentures due to issues with oral manipulation control of gums, tongue, throat, palate, and soft facial muscles. The convenience and control of oral accessories is pivotal for the success of full dentures, with feedback from requirements such as joints, accessibility, recipients, and patientcentered. Systems monitoring beneficial maintenance. In the context of compromised feedback in scenarios, Parkinson's patients, implant- or tooth-supported prosthetics offer advantages in retention and proprioception, and individual jaw movement [5,7,9]. patients often face challenges with denture retention and control due to involuntary muscle movements, xerostomia, and rigid musculature. Customizing impression methods proves beneficial in severe cases, and implant-supported dentures, including dimensions, length, width, and tissue quality, play crucial roles in the success of rehabilitation [9]. The choice of neck-bearing abutments and attachment types, such as O-ring designs or ball attachments, further influences plaque control and ease of insertion [10,11]. Longitudinal curriculum, chosen for its adaptability and reliability during extraoral functions, proves to be a pragmatic choice [12–14]. For the majority of Parkinson's patients, a full denture is an impressive component of functional, cosmetic, and psychological rehabilitation. Integrating a comprehensive treatment plan that addresses both physical mobility and emotional well-being is crucial, requiring a compassionate and understanding approach. The success of implant solutions, particularly with care techniques and accessories, hinges on factors like patient motivation, education, and diligent post-treatment follow-up. This holistic approach ensures a tailored response to the multifaceted challenges presented by Parkinson's disease, contributing to the overall well-being of the affected individuals.

Ethical Issue: In our research conducted under Tehran University of Medical Sciences, we acknowledge the paramount importance of upholding ethical standards in medical research. The research protocol for this study is aligned with Tehran Medical University's ethical and research regulations under IR.TUMS.ID, asserting that the ID number is referred to the study. This rules ethical questions surrounding participant consent. Informed consent from the patient was obtained before we began the study so that the images would be published. Thus after getting the participant's permission and carefully complying with the university's ethics board, we acknowledge that a comprehensive evaluation of

the ethical implications in real scenarios. Specifically, our study delves into the participant's comprehensive understanding and potential repercussions of sharing sensitive information, including personal data and images. We are committed to aligning with ethical guidelines and safeguarding individual privacy throughout the research process. Furthermore, we affirm that all actions actively participated in the study, contributing diverse perspectives. Each image was captured by different team members, and the credit is accorded to the collective efforts of the entire team. Overall, we are dedicated to addressing ethical concerns and ensuring transparency and integrity in our research endeavors.

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Nasal Rehabilitation in a Patient After Basal Cell Carcinoma and Radiotherapy: A Case Report

Author(s):

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ABSTRACT: Nasal rehabilitation following basal cell carcinoma (BCC) and radiotherapy presents significant challenges due to the intricate balance between aesthetic and functional restoration. This case report illustrates the rehabilitation of a 71-year-old male who underwent surgical excision and radiotherapy for BCC located on the left side of the nose. Post-treatment, the patient experienced dissatisfaction with his facial appearance, significantly impacting his quality of life. This study highlights the critical role of interdisciplinary collaboration in achieving optimal outcomes through prosthetic reconstruction. The patient received surgical removal of the tumor tissue, followed by detailed impression taking, modeling, and fabrication of a custom nasal prosthesis. Key considerations included anatomical accuracy, symmetry, and color matching to ensure a natural appearance. Emphasis was placed on patient-centered care, addressing both physical and psychological aspects. Despite achieving satisfactory results, limitations such as the absence of long-term follow-up data were noted. Future research should focus on long-term prosthesis performance and patient-reported outcomes to refine rehabilitation strategies. The case underscores the importance of an integrated approach combining surgical precision, prosthodontic expertise, and psychological support to improve patient satisfaction and quality of life following nasal rehabilitation post-BCC and radiotherapy.

Keywords: Nasal rehabilitation, Carcinoma, Radiotherapy

Introduction

Basal cell carcinoma (BCC) is the most common type of skin cancer, accounting for approximately 80% of all non-melanoma skin cancers. It arises from the basal cells in the epidermis and is primarily caused by prolonged exposure to ultraviolet (UV) radiation from the sun or tanning beds. BCC is typically slow-growing and rarely metastasizes, but it can cause significant local destruction of surrounding tissue. The treatment options for BCC include surgical excision, Mohs micrographic surgery, cryotherapy, photodynamic therapy, and topical medications.

Among these, surgical excision remains the gold standard due to its high cure rate and ability to provide a histopathological examination of the margins [1–7]. Radiotherapy is often employed as an adjunctive treatment for BCC, particularly in cases where surgical margins are positive or inoperable tumors are present. It is also a viable option for patients who are not suitable candidates for surgery due to age, comorbidities, or aesthetic concerns of the tumor. Radiotherapy involves the use of high-energy X-rays or other radiation particles to destroy cancer cells. While effective, however, facial rehabilitation post-basal cell carcinoma and radiotherapy requires a multidisciplinary approach to address both functional and psychosocial aspects, ultimately enhancing patient outcomes and quality of life. It can lead to acute and long-term side effects such as skin changes, fibrosis, and increased risk of secondary malignancies [1, 6, 7].

Facial rehabilitation following the surgical and radio therapeutic treatment of BCC poses unique challenges due to the importance of the face in facial aesthetics and function. Reconstruction aims to restore the form and function of the face, often requiring a multidisciplinary approach involving oncologists, surgeons, and prosthodontists. This process not only addresses the physical defects but also significantly impacts the patient's psychological well-being and quality of life [8–12].

The nose, being a prominent feature of the face, plays a crucial role in facial aesthetics and function. Hence, nasal rehabilitation following surgical and radio therapeutic treatment of BCC presents unique challenges. Reconstruction seeks to restore both the shape and functionality of the nose, typically necessitating a collaborative effort among oncologists, surgeons, and prosthodontists. Addressing the physical defects is essential, but equally important is managing the psychological impact on the patient's well-being and quality of life [1–4, 8–10]. Nasal prostheses are an effective option for patients requiring reconstruction after BCC removal. The process involves creating a customized prosthesis that matches the patient's skin color and anatomical features. Detailed impression-taking, modeling, and fabrication are necessary to achieve a natural appearance

and functional outcomes. The goal is to provide an aesthetically pleasing result that supports the patient's self-esteem and quality of life [1, 17, 18, 20].

In this study, we present a case of a patient who underwent surgical excision and radiotherapy for SCC of the left side of the nose. Post-treatment, the patient expressed significant dissatisfaction with her facial appearance, impacting her self-esteem and overall quality of life. This scenario highlights the importance of addressing both physical and psychological aspects in post-oncological rehabilitation.

The prosthetic process involved the removal of the residual portion of the left alar cleft to create a defect suitable for prosthetic reconstruction. Following this, a customized nasal prosthesis was fabricated, considering anatomical accuracy, symmetry, and color matching. Continuous collaboration between the patient, the surgeon, and the prosthodontist was crucial to ensure that the prosthesis aligned with the patient's aesthetic and functional needs [1].

Despite the successful outcome, the case also illustrated certain limitations, such as the absence of long-term follow-up data and objective patient-reported outcomes. Future research should focus on evaluating the long-term performance of nasal prostheses and their overall impact on patient-reported outcomes to improve rehabilitation strategies further.

Through this case report, we aim to elucidate the comprehensive approach to nasal reconstruction post-basal cell carcinoma excision and radiotherapy, emphasizing the importance of addressing both functional and psychosocial aspects to improve patient outcomes and quality of life.

Case Report Description

A 73-year-old male patient with an education degree (diploma) and marital status presented with a moderate socioeconomic background. Psychologically, he appeared indifferent. His chief complaint centered on dissatisfaction with his facial appearance, expressing feelings of sadness and uneasiness. This report highlights a predominantly stoic trait affecting his self-perception and quality of life. In his medical history, the patient had basal cell carcinoma located in the left ala of the nose. A subtle ulcer lesion on the skin of the left ala nasi marginal accompanied surgical intervention. The removed nodular lesion from the left ala of the nose was sent for histopathological examination, which confirmed the diagnosis of basal cell carcinoma with clear margins, indicating successful removal. Following the removal of the lesion, the patient underwent 77 sessions of radiotherapy as part of the treatment plan.

After two years' post-surgery and radiotherapy, during the patient's revisit for nose rehabilitation, a facial examination revealed an intact facial shape, equal facial proportion, and competent lip function. Functional assessment indicated

normal, jaw movements with a maximum opening of 40 mm without clicking, crepitus, or deviation during mouth opening and closing. No lacerations or ecchymosis, pain, or tenderness were noted on the face, and lymph nodes were not palpable. Muscle palpation revealed no tenderness. However, a medical portion of the left lip was found missing, rendering the nose deficit unfavorable for prosthetic reconstruction (Figure 1). Hence, it was recommended and subsequently accepted by the patient to remove this nonoperative portion to facilitate fitting a nasal prosthesis. Despite the patient's advanced age and previous history of basal cell carcinoma treated with radiotherapy, the desire for a nasal prosthesis remained, prompting the minimal surgical intervention.

Following the successful surgery to remove the left ala nasi, the nose deficit became favorable for prosthetic reconstruction (Figure 2). Three months post-surgery, with the nose healed and the wound healed, the patient proceeded to the next step in the rehabilitation process. The initial stage involved taking impressions of the patient's nose using alginate material (Figure 3). This entailed creating a border around the nose, applying Vaseline to the patient's face, and inserting cotton balls into the nasal cavity for control. Alginate mixed with water, glycerin, and salt was then applied to capture the facial impression. Due to its tendency to set in the setting, followed by Gibson's application to reinforce the impression. The patient was positioned at a 45° angle for the impression process and chair placement. Once the alginate and gypsum had set, the patient was asked

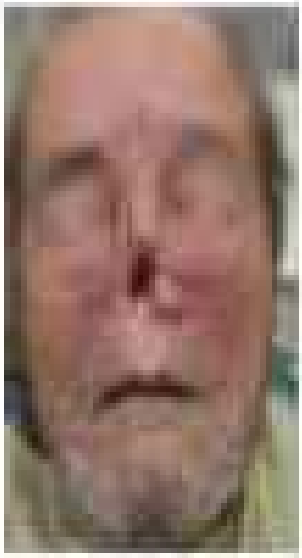

Figure 1 : The Patient's Profile. The patient demonstrating a nasal defect that has resulted from the removal of a basal cell carcinoma.

FIGURE 1 [illegible]

[illegible] in and were found successfully to be in the gastric mucosa of the patients. After removal, the stomach of the patients were checked for their [illegible] capacity. It was decided in this case to implement from the patients was a dry gastric [illegible] replacement may be [illegible] for [illegible]. The [illegible] provided was supported by the [illegible]

FIGURE 2 [illegible]

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[illegible]

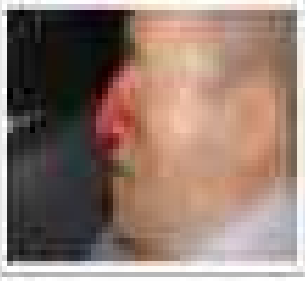

FIGURE 1 [illegible]

FIGURE 7: [illegible]

Patient was refused for acrylic gel application on the patient's face during the next visit.

After recovering the next patient's adequate, their varying angles and showing reminder with pain and mild redness, the patient's signature on scar and shape prompted progression to the next steps (Figure 7). The next patient was meticulously faced and informed to prepare for silicone injection. Collection of the nasal prosthesis was a crucial aspect of the process. Cleaning the face and applying Vaseline provided using silicone adhesive for its skin. The remarkable use of coloring, and patient acceptance, fantastic colorization involved mixing silicone with different shades to match the patient's skin tone, incorporating colors such as blue, black, red, brown, white, yellow, and pink. This mixture was then applied onto the flesh, with additional colorization applied to the margins for consistency. The flesh was sealed and left to set for 24 h to complete the process.

After the 24-h setting period, the nose prosthesis was removed from the flesh and the margins were trimmed with scissors (Figure 8). Once again, it was fitted to the patient's face for adaptation assessment, which proved satisfactory. Additional cosmetic colorization was necessary to match the patient's skin tone.

FIGURE 2 | [illegible]

FIGURE 3 | [illegible]

following areas of nasolabial vault as CAD, SAAD, and cpdn. After applying the color, the prosthesis was left to dry for 10 hours before being securely placed on the patient's face (Figure 7). Retention was achieved through adjacent

MOHAMMADIAH [illegible]
[illegible]

restorers, film adhesive, and eyeglasses, ensuring a secure fit and comfort for the patient.

Based on the recommendations outlined in the article, the patient was advised to remove the nose prosthesis during nighttime rest and activities involving strenuous exertion, such as exercise or running. Washing the prosthesis should be done sparingly, preferably once a week, and soap should be avoided. Additionally, exposure to ultraviolet light should be minimized to preserve the integrity of the prosthesis. Cleaning activities, removing the prosthesis from the face is recommended to ensure its longevity and proper maintenance.

FIGURE 2. [illegible]

Methods

The process began with taking impressions of the patient's nasal defect using alginate material, ensuring an accurate mold for prosthetic reconstruction. The patient expressed a desire for the replacement nose to resemble his own, so an impression from the patient's son was also taken.

The new patient of the same was satisfactorily restored to the case, ensuring symmetry and aesthetical correctness. Measurements were taken for proportional accuracy. Shades discussed were used to find the prosthesis due to its size, the texture and ease of coloring. Detailed involve intrinsic and extrinsic color matching to ensure a natural appearance. After the 24- hours waiting period, the prosthesis was fitted to the patient's face and additional adhesive was applied to secure the patient's skin tone.

The prosthesis was fixed using a combination of medical adhesives and natural materials, allowing for daily wear and removal. Although Osseo- integrated implants were considered for better retention, they were not possible due to the patient's previous radiotherapy.

Results:

The case presented exemplifies the successful rehabilitation journey of a 73- year- old male patient post- head and neck cancer excision and radiotherapy, culminating in the restoration of facial aesthetics and functionality through a customized nasal prosthesis. This comprehensive approach, involving interdisciplinary collaboration and patient- centric care, highlights key insights and considerations for case reconstruction in similar clinical contexts.

Through meticulous surgical planning and prosthetic fabrication, the patient's dissatisfaction with facial appearance was effectively addressed, leading to improvements in self- perception and quality of life. The removal of the residual portion of the left alae nasi facilitated optimal prosthesis adaptation, emphasizing the importance of surgical precision in achieving desirable outcomes. Psychosocial factors played a significant role throughout the rehabilitation process, underscoring the importance of holistic patient care beyond physical restoration. Addressing patient concerns and providing ongoing support is crucial for enhancing overall well- being and treatment success.

Attention to detail in impression- taking, modeling, and color matching ensured the creation of a natural- looking and comfortable nasal prosthesis. Iterative refinements based on patient feedback exemplified the patient- centered approach adopted, contributing to high levels of satisfaction and acceptance. Despite the successful rehabilitation achieved in this case, it is essential to acknowledge the limitations, including the absence of long- term follow- up data and subjective patient reported outcomes. Future research endeavors should prioritize evaluating long- term prosthesis performance and patient satisfaction to inform evidence- based practice and optimize outcomes in similar clinical scenarios.

The successful rehabilitation of the patient following head and neck cancer excision and radiotherapy underscored the feasibility and efficacy of a

reconstructed nasal prosthesis. This comprehensive approach, involving interdisciplinary collaboration and patient-centric care, led to improvements in self-perception and quality of life. The patient was advised to preserve the nasal prosthesis during activities like sleep and strenuous activities, wear a sun protector, and minimize exposure to ultraviolet light. In conclusion, this case report underscores the significance of interdisciplinary collaboration, patient-centered care, and meticulous attention to detail in achieving successful nasal rehabilitation post-head and neck carcinoma and radiotherapy. By addressing both functional and psychosocial aspects, we can aim to enhance patient outcomes and improve the overall quality of life for individuals undergoing similar journeys of nasal reconstruction.

Discussion

The case presented illustrates the successful rehabilitation of a patient following nasal cavity carcinoma excision and subsequent radiotherapy, culminating in the fabrication and fitting of a customized nasal prosthesis. The discussion delves into the clinical implications, challenges encountered, and considerations for future management.

The interdisciplinary approach involving surgeon, prosthodontist, and patient-centric care was pivotal in addressing both functional and aesthetic concerns. Collaboration among specialists facilitated comprehensive evaluation, treatment planning, and execution, ensuring optimal outcomes tailored to the patient's needs and desires [16, 17]. Psychological factors significantly influenced the patient's journey, as evidenced by his dissatisfaction with facial appearance and negative self-perception [17]. Addressing psychosocial aspects alongside physical rehabilitation is essential for holistic patient care and improving quality of life post-oncological treatment [18, 19].

In addition to traditional nasal prosthesis fabrication, there are several other methods of nasal reconstruction available for patients who have undergone excision of head and neck carcinoma. Surgical reconstruction is a common approach, where local or distant flaps of skin and cartilage are used to rebuild the nose [7, 20, 21, 22]. Surgical methods can provide a permanent solution and avoid the need for external prostheses. However, surgical reconstruction can complicate, particularly in cases where patients have undergone radiotherapy, which can compromise tissue healing. Additionally, achieving both functional and aesthetic success through surgery often requires multiple procedures and long recovery periods [18, 24, 27].

Emerging technologies such as 3D printing offer promising alternatives for nasal reconstruction. In recent years, 3D-printed prostheses have gained traction due

to their precision and ability to customize designs that perfectly match the patient's anatomical structure [15, 16]. This technology allows the exact replica of the patient's nose to be created using imaging and 3D modeling. While 3D printing provides excellent aesthetic outcomes, particularly with advancements in materials that mimic the texture and color of human skin, it remains less accessible due to cost and limited availability in clinical settings. Moreover, the durability and long-term functionality of 3D-printed prostheses are still being evaluated [19, 20].

In this case, a custom-made prosthesis was chosen over surgical and 3D-printed alternatives due to the patient's previous history of radiotherapy and advanced age. Surgical options were considered too risky due to potential healing complications, and 3D printing was not readily available. The prosthetic approach involved detailed impression taking, wax sculpting, and color matching, with iterative adjustments based on patient feedback to ensure a satisfactory outcome [17, 21, 22, 23]. This method remains highly effective in cases where surgical reconstruction is not feasible, providing patients with a non-invasive solution that can be easily maintained and replaced as needed.

Long-Term Follow-up. One limitation of this case is the absence of long-term follow-up data regarding the durability of the prosthesis and the patient's satisfaction. To address this gap, future assessments could be conducted via telephone return visits and questionnaire surveys. These tools would enable clinicians to gather valuable feedback on the long-term functionality of the prosthesis, its impact on the patient's psychosocial well-being, and any maintenance challenges faced. Implementing follow-up surveys at intervals such as 6 months and 12 months post-rehabilitation could provide deeper insights into patient-reported outcomes, including prosthesis comfort, daily usability, and psychological effects. By utilizing remote follow-up methods, it becomes feasible to monitor patient progress without imposing the logistical burden of in-person clinic visits [21, 22].

Customization of the nasal prosthesis was a critical aspect of the rehabilitation process, requiring intricate and authentic color matching to achieve a natural appearance [24, 25]. Proper attention regarding prosthesis maintenance, including cleaning, storage, and UV protection, is essential for prolonging prosthesis longevity and preserving aesthetic integrity [11, 26].

In summary, nasal rehabilitation after basal cell carcinoma and radiotherapy requires a comprehensive approach that considers both functional and psychosocial factors to improve patient outcomes. While surgical reconstruction and 3D printing present viable alternatives to prosthetic solutions, each method

[illegible] in [illegible] and must be carefully evaluated based on the patient's medical history and personal needs. This case report highlights the significance of teamwork, patient-focused care, and careful attention to detail in achieving effective facial reconstruction and enhancing quality of life.

Author Contributions

All authors have made significant contributions to the conception, design, execution, and interpretation of the study. Prof. Dr. Tamara Gurgenidze led the surgical and prosthodontic procedures, and Asst. Prof. Dr. Nazgenidze Shoshiashvili led the data collection, and manuscript preparation. Rest of the co-authors contributed to patient care, data analysis, and manuscript review. All authors have approved the final manuscript.

Ethics Statement

This case was conducted at the university hospital of Tbilisi University of Medical Sciences under the supervision of professors from the prosthetics department. All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation and with the Helsinki Declaration. Informed written consent was obtained from the patient for participation in the study, including the use of all personal information and images for research purposes.

Data Availability Statement

Access to the data is available upon request, subject to approval by the research committee and correspondence author this study. Dr. Nazgenidze Shoshiashvili. Interested parties may obtain access by submitting a polite request to the designated contact person. We are committed to facilitating access to the data while ensuring compliance with ethical and privacy considerations.

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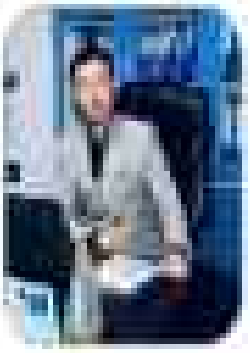

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