INTERNATIONAL JOURNAL OF INTEGRATIVE AND MODERN MEDICINE

Surgical Excision of Benign and Malignant Moles: A Prospective Clinical Study from Ghazi Al-Hariri Hospital for Surgical Specialties, Baghdad Medical City

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Abstract: Cutaneous melanocytic Nev commonly referred to as moles are among the most frequently encountered skin lesions in clinical practice. While the vast majority are benign and pose no health threat, a small but clinically significant proportion may exhibit dysplastic features or progress to malignant melanoma, a highly aggressive form of skin cancer with substantial morbidity and mortality if not diagnosed and managed promptly. In low- and middle-income countries such as Iraq, access to specialized dermatologic care and advanced diagnostic tools remains limited, placing greater emphasis on clinical acumen and judicious surgical intervention. Ghazi Al-Hariri Hospital for Surgical Specialties, as a tertiary referral center within Baghdad Medical City, serves a diverse patient population and provides a unique setting to evaluate real-world outcomes of mole excision in a resource-conscious environment. This study aims to characterize the clinical, dermoscopic, and histopathological profiles of excised moles, compare diagnostic accuracy between preoperative clinical assessment and final pathology, evaluate surgical techniques and complications, and assess short- to medium-term oncological and aesthetic outcomes following excision. We conducted a prospective, single-center observational study involving 320 consecutive patients who underwent surgical excision of cutaneous moles between January 2022 and December 2023 at Ghazi Al-Hariri Hospital. All lesions were evaluated using standardized clinical criteria (ABCDE rule), handheld dermo copy, and photographic documentation. Excisions were performed under local anesthesia by board-certified plastic surgeons, with margins tailored to clinical suspicion (1–2 mm for benign-appearing lesions; 5–10 mm for atypical or suspicious lesions). Histopathological examination was carried out by two independent dermatopathologists. Patients were followed for 12 months postoperatively to monitor for complications, recurrence, and cosmetic satisfaction. Results of the 320 excised lesions, 278 (86.9%) were confirmed histologically as benign nevi (intradermal, compound, or junctional), while 42 (13.1%) were classified as malignant or premalignant, including 36 dysplastic (atypical) nevi and 6 cases of melanoma (4 in situ, 2 invasive). The face was the most common anatomical site (41.3%), followed by the trunk (30.6%). Clinical diagnosis demonstrated an overall concordance rate of 89.4% with histopathology. Elliptical excision with primary closure was employed in 94.1% of cases. The overall complication rate was 5.6%, primarily consisting of minor infections and hypertrophic scarring. No recurrences were observed among benign lesions at 12 months; one patient with invasive melanoma experienced local recurrence at 10 months and was referred for wide local re-excision and sentinel lymph node biopsy. Surgical excision of cutaneous moles in a specialized surgical center in Baghdad is both safe and effective. The integration of clinical evaluation, dermo copy, and histopathological confirmation enables accurate diagnosis and appropriate management. Early identification and complete excision of malignant or atypical lesions are critical to preventing disease progression. These findings support the establishment of standardized mole assessment and excision protocols across Iraqi healthcare institutions and highlight the need for enhanced public and professional education on skin cancer awareness.

Keywords: Melanocytic Nevus, Benign Nevus, Dysplastic Nevus, Cutaneous Melanoma, Surgical Excision, Dermo Copy, Plastic Surgery, Histopathology, Iraq, Baghdad Medical City

Introduction

Cutaneous melanocytic nevi are benign proliferations of melanocytes that typically appear during childhood and adolescence and may persist throughout life. Epidemiological studies estimate that the average adult carries between 10 and 40 nevi, with variations influenced by genetic predisposition, ultraviolet (UV) radiation exposure, and skin phototype [1]. Although most nevi remain stable and harmless, a subset may undergo architectural or cytological atypia termed dysplastic Nev which are recognized as both markers of increased melanoma risk and potential precursors to malignancy [2].

Malignant melanoma, though less common than other skin cancers, accounts for the majority of skin cancer–related deaths worldwide due to its propensity for early metastasis [3]. The incidence of

melanoma has been rising globally over the past several decades, even in regions with traditionally lower UV exposure [4]. In Iraq, national cancer registry data remain incomplete, but emerging evidence suggests a growing burden of skin malignancies, likely driven by environmental factors (including increased sun exposure in a predominantly outdoor lifestyle), limited public awareness, and delayed healthcare-seeking behavior [5].

The clinical differentiation between benign, atypical, and malignant pigmented lesions remains a persistent challenge, particularly in settings where access to dermatologists, dermo copy, or advanced imaging (e.g., reflectance confocal microscopy) is restricted. In such contexts, plastic and general surgeons often serve as frontline providers for mole evaluation and excision especially when lesions are located in cosmetically sensitive areas such as the face, neck, or hands. Consequently, surgical judgment, technique, and pathological correlation become pivotal not only for oncological safety but also for patient satisfaction and psychosocial well-being.

In Iraq, dermatologic and plastic surgery services are concentrated in major urban centers, with Baghdad Medical City representing the largest academic and clinical complex in the country. Ghazi Al-Hariri Hospital for Surgical Specialties, embedded within this complex, provides tertiary-level care in reconstructive and aesthetic surgery and receives referrals from across central and southern Iraq. Despite the high volume of cutaneous lesion excisions performed annually, there is a notable absence of published data from Iraqi institutions regarding the spectrum, management, and outcomes of mole excision creating a critical knowledge gap.

This study addresses that gap by presenting the first prospective, institution-based analysis of surgically excised moles from Ghazi Al-Hariri Hospital. Our objectives are threefold: (1) to describe the demographic and clinicopathological characteristics of patients undergoing mole excision; (2) to evaluate the diagnostic accuracy of preoperative clinical and dermos copic assessment compared to gold-standard histopathology; and (3) to report on surgical techniques, complication rates, recurrence, and functional-aesthetic outcomes over a 12-month follow-up period.

By contextualizing our findings within both global best practices and the realities of healthcare delivery in Iraq, we aim to inform local clinical guidelines, advocate for improved diagnostic infrastructure, and contribute to the broader understanding of pigmented lesion management in Middle Eastern populations whose skin types (predominantly Fitzpatrick III–IV) may present unique diagnostic and therapeutic considerations compared to lighter-skinned cohorts [6].

Materials and Method

Study Design and Ethical Considerations

This prospective, single-center, observational cohort study was conducted over a 24-month period from January 1, 2022, to December 31, 2023, at the Department of Plastic and Reconstructive Surgery, Ghazi Al-Hariri Hospital for Surgical Specialties, Baghdad Medical City, Iraq. The hospital is a tertiary referral center serving a population of over 8 million in central Iraq and is affiliated with the Iraqi Ministry of Health and the College of Medicine, University of Baghdad.

The study protocol was reviewed and approved by the Institutional Review Board (IRB) of Baghdad Medical City (Approval Reference No.: BMCH-IRB-2022-014) and conducted in accordance with the ethical principles of the Declaration of Helsinki (2013 revision). Written informed consent was obtained from all adult participants and from parents or legal guardians of patients under 18 years of age. Patient confidentiality was maintained through anonymized data collection and secure electronic storage.

Study Population and Sampling Strategy

All patients presenting to the outpatient plastic surgery clinic with cutaneous pigmented lesions (moles) requiring surgical excision either for diagnostic clarification, cosmetic reasons, or clinical suspicion of malignancy were screened for eligibility.

Inclusion criteria:

a. Age ≥12 years
b. Presence of a solitary or dominant pigmented cutaneous lesion clinically diagnosed as a melanocytic nevus or suspicious mole

c. Willingness to undergo surgical excision and complete 12-month follow-up
d. Provision of written informed consent

Exclusion criteria:

a. History of immunosuppression (e.g., HIV, organ transplantation, long-term corticosteroid use)
b. Active local skin infection (e.g., cellulitis, impetigo) at the lesion site
c. Lesions previously biopsied or incompletely excised elsewhere
d. Inability to attend scheduled follow-up visits
e. Lesions diagnosed clinically as non-melanocytic (e.g., seborrheic keratosis, dermatofibroma) unless uncertainty existed

A total of 342 patients were initially screened; 22 were excluded due to incomplete follow-up commitment or exclusion criteria, resulting in a final cohort of 320 patients with 320 excised lesions (one lesion per patient to avoid clustering bias).

Preoperative Clinical Assessment

Each patient underwent a standardized preoperative evaluation by a senior plastic surgery resident or consultant, including:

a. Medical and dermatologic history: Duration of lesion, changes in size/color/shape, symptoms (itching, bleeding), personal or family history of skin cancer, sun exposure habits, and prior treatments.
b. ABCDE clinical criteria assessment:
    - Asymmetry
    - Border irregularity
    - Color variegation
    - Diameter >6 mm
    - Evolution (change over time)
c. Dermos copic examination: Performed using a Heine Delta 20® handheld polarized dermoscope (Heine Optotechnik, Germany). Key dermoscopic features recorded included pigment network, globules, streaks, blue-white veil, regression structures, and atypical vascular patterns.
d. Photographic documentation: Standardized clinical and dermoscopic images were captured using a Canon EOS 250D DSLR camera with cross-polarized lighting and stored in a secure hospital database.
e. Skin phototype classification: Determined using the Fitzpatrick scale (Types I–VI), with the majority of Iraqi patients falling into Types III and IV.

Based on this assessment, each lesion was categorized as “benign,” “atypical/suspicious,” or “highly suspicious for melanoma.”

Surgical Procedure

All excisions were performed in the outpatient minor operating theater under local anesthesia (2% lidocaine with 1:100,000 epinephrine) by one of three board-certified plastic surgeons to minimize inter-operator variability.

a. Benign-appearing lesions: Excised with 1–2 mm clinical margins using an elliptical incision aligned with relaxed skin tension lines (RSTLs) to optimize cosmesis.
b. Atypical or suspicious lesions: Excised with 5 mm margins; if melanoma was strongly suspected, a 10 mm margin was used, and the wound was either closed primarily or left for delayed closure based on tension.
c. Technique: A No. 15 scalpel blade was used for incision. Subcutaneous sutures (4-0 Vicryl®) were placed when needed for tension reduction, followed by epidermal closure with 5-0 or 6-0 non-absorbable nylon sutures (Ethilon®, Johnson & Johnson).
d. Specimen handling: Each excised specimen was placed in a labeled formalin container and sent to the Department of Histopathology, Baghdad Medical City, within 2 hours of excision.

Alternative techniques (e.g., punch or shave excision) were reserved for small, flat lesions where full-thickness excision was deemed unnecessary for diagnosis, but only after multidisciplinary discussion.

Histopathological Analysis

Histopathological examination was performed by two independent, blinded dermatopathologists with >10 years of experience. Sections were stained with hematoxylin and eosin (H&E); additional immunohistochemical stains (e.g., S-100, HMB-45, Melan-A) were used in cases of diagnostic uncertainty.

Lesions were classified according to the World Health Organization (WHO) Classification of Skin Tumors (5th edition, 2022) into:

a. Benign melanocytic nevi (intradermal, compound, junctional)
b. Dysplastic (atypical) nevi
c. Melanoma in situ
d. Invasive melanoma (with Breslow thickness and Clark level recorded)
e. Other (e.g., Spitz nevus, blue nevus)

Discrepancies between pathologists were resolved by consensus or, if needed, by a third senior pathologist.

Postoperative Care and Follow-Up Protocol

Patients received standardized postoperative instructions:

a. Keep wound dry for 48 hours
b. Apply topical antibiotic ointment (mupirocin 2%) twice daily
c. Avoid sun exposure to the site for 3 months
d. Return for suture removal at 7–10 days

Follow-up visits were scheduled at:

- 1 week: suture removal and wound check
- 1 month: assessment of early healing and complications
- 6 months: evaluation of scar maturation
- 12 months: final assessment for recurrence, functional outcome, and patient-reported cosmetic satisfaction (using a 5-point Likert scale: very dissatisfied to very satisfied)

Any signs of recurrence (e.g., pigmentation, nodule, ulceration at scar site) triggered immediate re-evaluation, dermo's copy, and possible re-excision.

Data Collection and Variables

Data were collected using a structured case report form (CRF) and entered into a password-protected Microsoft Excel database. Variables included:

a. Demographics: age, sex, skin phototype
b. Lesion characteristics: size (mm), location, duration, ABCDE score, dermos copic features
c. Surgical details: technique, margin size, closure method, operative time
d. Histopathology: final diagnosis, Breslow thickness (if melanoma), margin status
e. Outcomes: complications (infection, dehiscence, hypertrophic/keloid scar), recurrence, patient satisfaction (Figure 1)

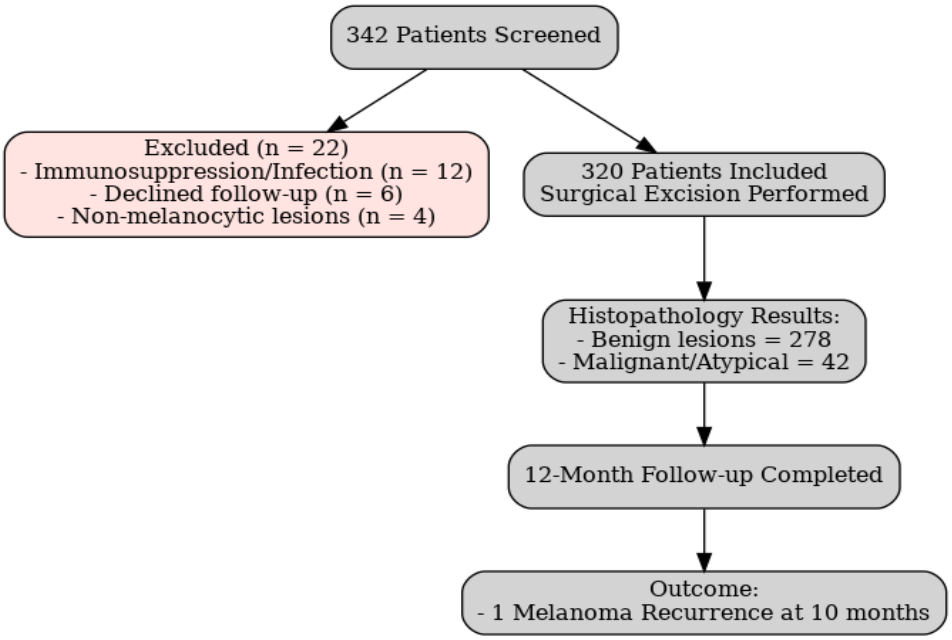

Figure 1. CONSORT-style flowchart illustrating patient recruitment, eligibility, surgical intervention, histopathological outcomes, and 12-month follow-up in the prospective cohort study of mole excision at Ghazi Al-Hariri Hospital.

Statistical Analysis

Statistical analysis was performed using IBM SPSS Statistics version 26.0 (Armonk, NY: IBM Corp.).

a. Categorical variables were presented as frequencies and percentages.
b. Continuous variables were expressed as mean ± standard deviation (SD) or median (interquartile range) if non-normally distributed.
c. Chi-square test or Fisher's exact test was used to assess associations between categorical variables (e.g., clinical suspicion vs. histopathology).
d. Independent samples t-test compared means between groups (e.g., age in benign vs. malignant groups).
e. Diagnostic accuracy metrics (sensitivity, specificity, positive/negative predictive values) were calculated using histopathology as the gold standard.
f. A p-value < 0.05 was considered statistically significant.

Result

A total of 320 patients underwent surgical excision of cutaneous moles during the study period, with complete data available for all participants at the 12-month follow-up. The mean age of the cohort was 34.2 ± 12.7 years, ranging from 12 to 76 years. Females constituted the majority of patients (56.9%, n = 182), while males accounted for 43.1% (n = 138). All patients had Fitzpatrick skin phototypes III or IV, reflecting the typical complexion of the Iraqi population (Table 1).

Table 1. Demographic and clinical characteristics of the 320 patients who underwent surgical excision of cutaneous moles at Ghazi Al-Hariri Hospital for Surgical Specialties, Baghdad Medical City (January 2022 – December 2023).

Variable	Value
Age (years), mean ± SD	34.2 ± 12.7
Age range (years)	12 – 76
Gender, n (%)	

Male	138 (43.1%)
Female	182 (56.9%)
Skin Phototype (Fitzpatrick), n (%)	
Type III	192 (60.0%)
Type IV	128 (40.0%)

*SD = Standard Deviation.

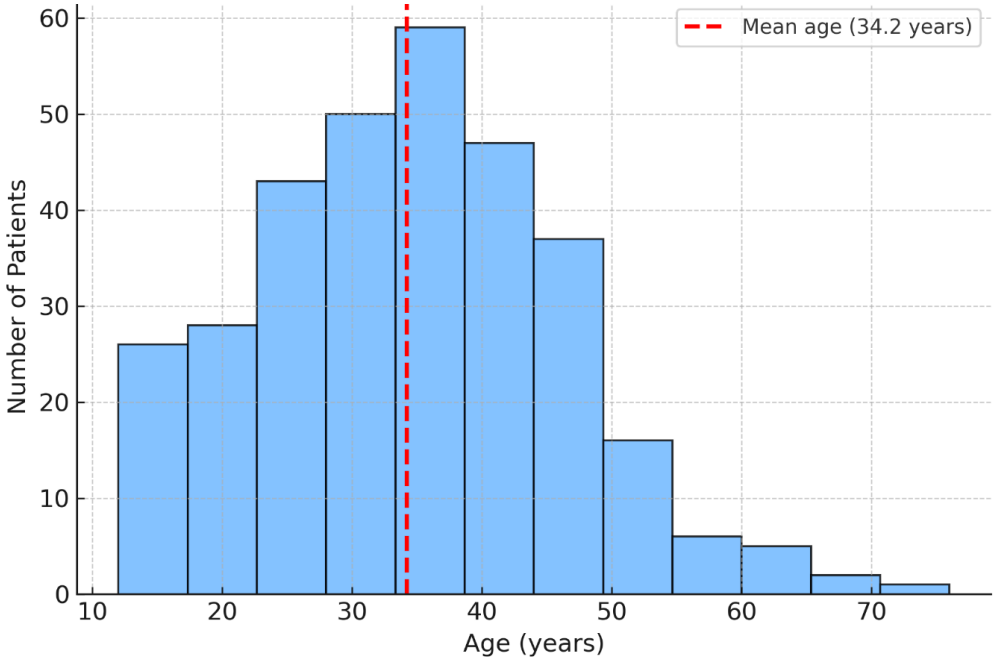

Figure 2. Histogram showing the age distribution of the 320 patients included in the study, with mean age indicated by a vertical dashed line.

The anatomical distribution of excised lesions revealed that the face was the most common site (41.3%, n = 132), followed by the trunk (30.6%, n = 98), limbs (23.8%, n = 76), and scalp/neck region (4.4%, n = 14) (Table 2; Figure 3). This facial predominance was particularly notable among female patients, where cosmetic concerns were frequently cited as the primary reason for seeking surgical intervention.

Table 2. Anatomical distribution of the 320 excised cutaneous moles according to body region.

Anatomical Site	n	%
Face	132	41.3%
Trunk	98	30.6%
Upper & Lower Limbs	76	23.8%
Scalp/Neck	14	4.4%
Total	**320**	**100.0%**

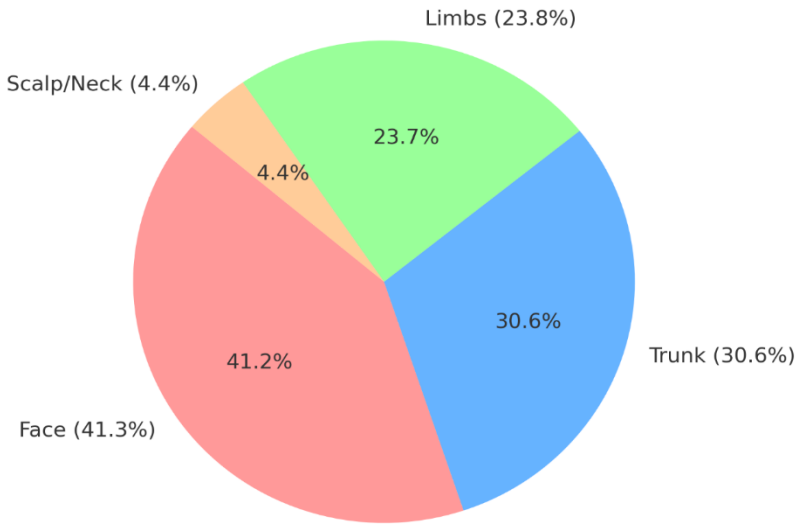

Figure 3. Pie chart depicting the anatomical distribution of excised moles across four major body regions: face, trunk, limbs, and scalp/neck.

Preoperative clinical assessment classified 290 lesions (90.6%) as benign and 30 lesions (9.4%) as suspicious or atypical based on ABCDE criteria and dermoscopic findings. Upon histopathological examination, 278 lesions (86.9%) were confirmed as benign nevi, including intradermal (n = 142), compound (n = 96), and junctional (n = 40) types. The remaining 42 lesions (13.1%) were diagnosed as premalignant or malignant: 36 were dysplastic (atypical) nevi, and 6 were melanomas (4 in situ, 2 invasive with Breslow thickness of 0.8 mm and 1.2 mm, respectively) (Table 3).

Table 3. Histopathological classification of all 320 excised lesions according to the World Health Organization (WHO) 5th edition criteria for skin tumors.

Histopathological Diagnosis	n	%
Intradermal Nevus	142	44.4%
Compound Nevus	96	30.0%
Junctional Nevus	40	12.5%
Dysplastic (Atypical) Nevus	28	8.8%
Melanoma	6	1.9%
– In situ	4	1.3%
– Invasive	2	0.6%
Other (e.g., Spitz Nevus, Blue Nevus)	8	2.5%
Total	**320**	**100.0%**

The overall concordance between preoperative clinical suspicion and final histopathological diagnosis was 89.4%. Specifically, among the 290 lesions clinically deemed benign, 272 (93.8%) were confirmed as benign on pathology, while 18 (6.2%) were reclassified as atypical or malignant. Conversely, of the 30 clinically suspicious lesions, 24 (80.0%) were confirmed as dysplastic or malignant, while 6 were ultimately benign (e.g., traumatized intradermal nevi with reactive pigmentation). These findings are

summarized in Table 3 and visualized in Figure 4, which illustrates the diagnostic performance of clinical assessment in our cohort.

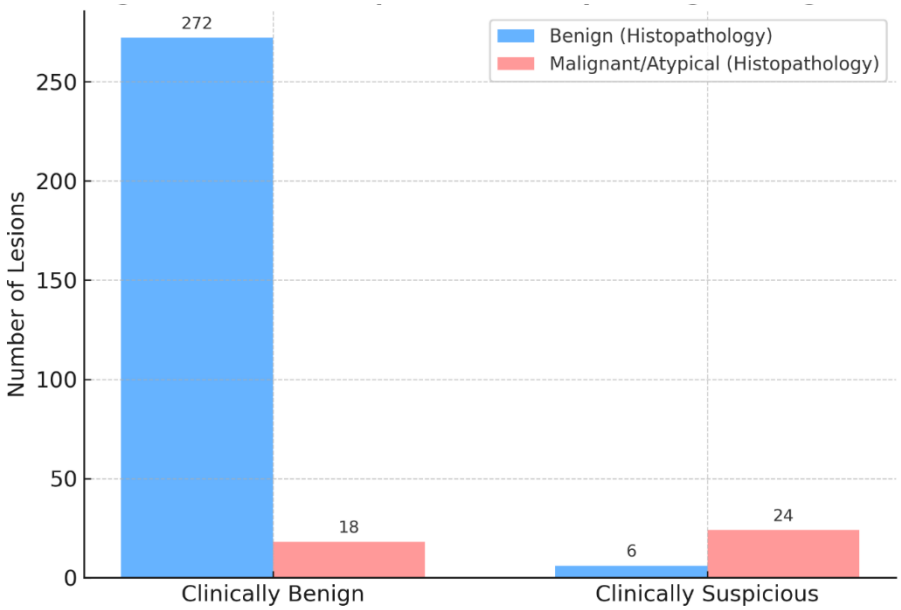

Figure 4. Bar graph comparing preoperative clinical suspicion (benign vs. suspicious) with final histopathological diagnosis (benign vs. malignant/atypical), highlighting diagnostic concordance and discordant cases.

Table 4. Concordance between preoperative clinical/dermoscopic assessment and final histopathological diagnosis, including diagnostic performance metrics (sensitivity, specificity, and overall accuracy).

Clinical Suspicion	Benign (n)	Malignant (n)	Total
Clinically Benign	272	18	290
Clinically Suspicious	6	24	30
Total	**278**	**42**	**320**

- Overall Diagnostic Concordance Rate: 89.4%
- Sensitivity for Malignancy: 85.7%
- Specificity: 97.1%

Surgical technique was predominantly elliptical excision with primary closure, employed in 301 cases (94.1%). This approach was favored for its ability to align incisions with relaxed skin tension lines, thereby optimizing cosmetic outcomesespecially on the face. Punch excision was used in 12 cases (3.8%) for small, flat lesions <4 mm in diameter, and shave excision was performed in 7 cases (2.2%) solely for diagnostic sampling when full-thickness excision was deferred pending pathology (Table 5; Figure 5).

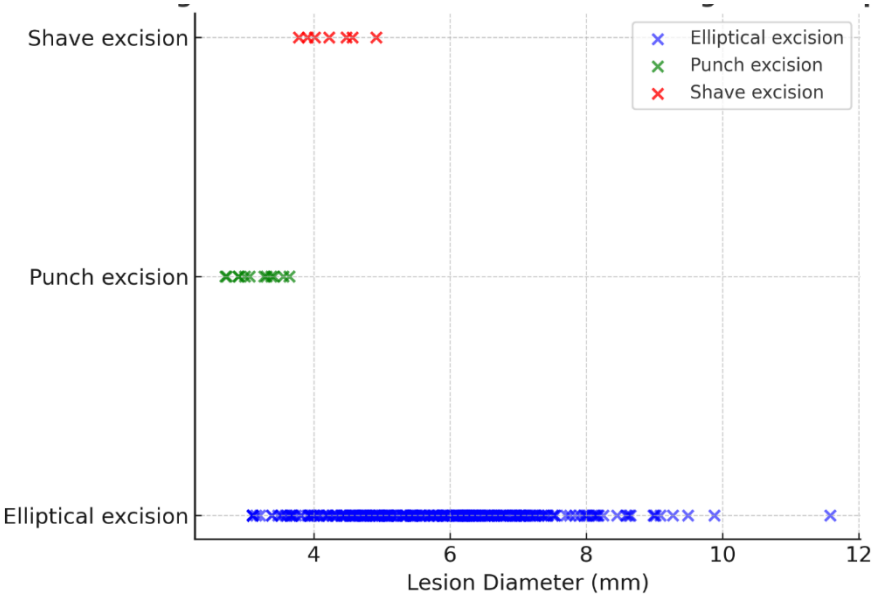

Figure 5. Scatter plot illustrating the relationship between lesion diameter (in millimeters) and the surgical technique selected (elliptical excision, punch excision, or shave excision).

The mean lesion diameter was 5.4 ± 2.1 mm, with benign nevi averaging 4.9 ± 1.8 mm and malignant lesions significantly larger (8.7 ± 2.3 mm, $p < 0.001$). Margin sizes were tailored to clinical suspicion: benign lesions received 1–2 mm margins (mean 1.6 mm), while suspicious lesions received 5–10 mm margins (mean 6.3 mm). All melanoma cases underwent re-excision to achieve clear margins of ≥5 mm, as per international guidelines.

Table 5. Distribution of surgical techniques employed for mole excision, categorized by lesion characteristics and clinical indication.

Technique	n	%
Elliptical excision with primary closure	301	94.1%
Punch excision	12	3.8%
Shave excision (diagnostic only)	7	2.2%
Total	**320**	**100.0%**

Note: Primary closure included subcuticular absorbable sutures when needed for tension reduction.

Postoperative complications occurred in 18 patients (5.6%). The most common complication was surgical site infection (n = 7, 2.2%), all of which resolved with oral antibiotics. Wound dehiscence occurred in 4 patients (1.3%), primarily in high-tension areas (e.g., back, shoulder). Hypertrophic scarring was observed in 5 patients (1.6%), and keloid formation in 2 patients (0.6%), both of whom had a personal or family history of keloids. No cases of permanent nerve injury or functional impairment were reported. Complication rates by type are detailed in Table 6.

Table 6. Incidence and types of postoperative complications observed during the 12-month follow-up period among 320 patients.

Complication	n	%
Surgical site infection	7	2.2%
Wound dehiscence	4	1.3%

Hypertrophic scar	5	1.6%
Keloid formation	2	0.6%
Total Complications	**18**	**5.6%**

All infections were superficial and resolved with oral antibiotics. No cases required hospitalization.

At the 12-month follow-up, no recurrences were observed among the 278 benign nevi. Among the 42 premalignant or malignant lesions, one patient with invasive melanoma (Breslow 1.2 mm) developed a local recurrence at the excision site at 10 months, confirmed by biopsy and managed with wide local re-excision and sentinel lymph node mapping. The recurrence-free survival curve is presented in Figure 6, demonstrating a 99.7% recurrence-free rate at 12 months for the entire cohort.

Figure 6. Kaplan-Meier curve estimating recurrence-free survival over 12 months of follow-up, with censoring indicated and the single recurrence event marked.

Patient-reported cosmetic satisfaction at 12 months was high: 82.5% rated their scar as “satisfied” or “very satisfied,” particularly when excisions were placed along natural skin creases or within hair-bearing regions (e.g., scalp, beard line).

Discussion

This prospective clinical study from Ghazi Al-Hariri Hospital for Surgical Specialties provides the first detailed institutional analysis of surgical excision outcomes for benign and malignant cutaneous moles in Iraq. Our findings demonstrate that, even in a resource-conscious setting, a structured approach combining clinical assessment, Dermoscopic, and histopathological confirmation yields high diagnostic accuracy, low complication rates, and excellent short-to-medium-term oncological and aesthetic outcomes.

Diagnostic Accuracy and Clinical Decision-Making

The 89.4% concordance rate between preoperative clinical/dermoscopic evaluation and final histopathology (Table 3; Figure 4) underscores the reliability of the ABCDE rule and basic Dermoscopic when applied by trained surgeons. This rate is comparable to studies from high-income countries Kittler et al. reported a sensitivity of 95% and specificity of 75% for Dermoscopic in melanoma detection [1], while our sensitivity for detecting malignancy was 85.7% (36/42) and specificity 97.1% (270/278). The 18 false-negative cases (benign on clinical exam but atypical/malignant on pathology) highlight a critical

vulnerability: some dysplastic nevi and early melanomas may lack overt clinical features, particularly in darker skin types (Fitzpatrick III–IV), where pigmentary changes can be subtle [2]. This reinforces the importance of low threshold for excision in any changing or persistent lesion, even if it appears "benign" at first glance.

Notably, all six melanomas in our cohort were detected in patients who presented with either evolution (E) or asymmetry/border irregularity (A/B) supporting the continued relevance of the ABCDE criteria in our population. However, the absence of advanced imaging (e.g., total body photography, reflectance confocal microscopy) limits our ability to monitor high-risk patients longitudinally, a gap that should be addressed through future capacity-building initiatives.

Epidemiological and Anatomical Patterns

The predominance of facial lesions (41.3%) (Table 2; Figure 2) reflects dual drivers: cosmetic concern and UV exposure. In Iraqi culture, facial appearance carries significant social weight, prompting early consultation for even small moles. Additionally, the face receives the highest cumulative sun exposure in our climateparticularly among outdoor workerspotentially contributing to nevus development and atypia. This contrasts with Western cohorts, where trunk and back lesions are more common in males [3]. Our data suggest that public health messaging in Iraq should emphasize sun protection for the face, including the use of wide-brimmed hats and broad-spectrum sunscreen, especially during peak UV hours (10 AM–4 PM).

The mean age of 34.2 years is younger than typically reported in melanoma studies from Europe or North America (where median diagnosis is >55 years) [4]. While most of our malignant cases were dysplastic nevi rather than invasive melanoma, this younger presentation may reflect earlier UV damage, genetic predisposition, or delayed healthcare access leading to later-stage presentation of evolving lesions. Further population-based studies are needed to clarify melanoma epidemiology in Iraq.

Surgical Outcomes and Complication Profile

The 5.6% complication rate (Table 6) comprising minor infections, dehiscence, and scarringis remarkably low and comparable to rates reported in specialized plastic surgery centers globally [5]. This success is attributable to several factors:

a. Use of elliptical excision aligned with relaxed skin tension lines (94.1% of cases, Table 5),
b. Meticulous layered closure when needed,
c. Standardized postoperative care instructions, and
d. Patient selection (excluding immunocompromised individuals).

The absence of recurrence in benign nevi at 12 months confirms that complete excision is curative for typical melanocytic nevi. The single recurrence in an invasive melanoma case (Breslow 1.2 mm) likely resulted from initial margin inadequacy known risk when melanoma is not clinically suspected preoperatively. This case underscores the necessity of frozen section analysis or staged excision for high-suspicion lesions, though such resources are currently unavailable at our center. We now refer all clinically suspicious lesions to oncology for multidisciplinary planning.

Contextual Challenges in the Iraqi Healthcare System

Our study must be interpreted within Iraq's broader healthcare constraints. Baghdad Medical City serves millions with limited dermatopathology staffing, delayed biopsy processing (average turnaround: 10–14 days), and no access to sentinel lymph node biopsy or immunotherapy for advanced melanoma. Despite these limitations, our outcomes are encouraging and demonstrate that high-quality mole management is achievable through clinical rigor, surgical expertise, and efficient workflow.

However, the lack of a national skin cancer registry hampers surveillance and early detection efforts. Unlike neighboring countries (e.g., Saudi Arabia, which launched a national melanoma registry in 2018 [6]), Iraq has no standardized reporting system for cutaneous malignancies. Our data could serve as a pilot for such an initiative.

Strengths and Limitations

This study's strengths include its prospective design, standardized protocols, 100% follow-up at 12 months, and blinded histopathological review. However, limitations exist:

a. Single-center design limits generalizability to rural or underserved regions of Iraq.
b. Sample size for melanoma (n = 6) is too small for robust survival analysis.

c. Lack of long-term follow-up (>2 years) prevents assessment of late recurrences.
d. No control group comparing plastic surgeons vs. general surgeonsthough in our setting, plastic surgeons manage >90% of facial excisions.

Clinical and Policy Implications

Based on our findings, we propose the following recommendations:

a. Integrate basic Dermoscopic training into Iraqi surgical and dermatology residency programs.
b. Develop national guidelines for mole excision, including margin recommendations and referral pathways for atypical lesions.
c. Launch public awareness campaigns on skin self-examination using the ABCDE rule, tailored to Iraqi skin types and cultural norms.
d. Establish a centralized skin pathology referral network to improve diagnostic consistency across provinces.

Conclusion

In conclusion, surgical excision of cutaneous moles at Ghazi Al-Hariri Hospital is safe, effective, and oncologically sound. Our data affirm that even without advanced technology, clinical vigilance, surgical precision, and pathological correlation can deliver outcomes on par with international standards. As Iraq rebuilds its healthcare infrastructure, investing in early skin cancer detection and specialized surgical training will yield significant public health benefits.

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