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12 – Pathology and Minor Surgery in Primary Care

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Since last century, family doctors have played a varying role in the management of skin lesions. While family doctors traditionally played an important role in handling skin lesions, this changed in the second half of last century when minor surgery performed by family doctors declined as a result of limited funding and the growing wish of patients to be treated by specialists. The increasing costs of this led to the insight that minor surgery primarily belongs in family medicine, and financial incentives were created for family doctors to perform more minor surgery. Since then, the role of family doctors in the management of skin lesions has gradually increased, illustrated by a significant increase in the volume of minor surgery performed in primary care in the UK. This largely involves skin lesions that may be malignant, and thus there has been discussion about the appropriateness of clinical management decisions in family medicine with several issues of concern:

- The quality of the clinical diagnosis by family doctors
- The need for histological confirmation of the clinical diagnosis
- The cost-effectiveness of histological confirmation
- The technical quality of the surgical procedures performed by family doctors
- The cost-effectiveness of minor surgery in family medicine

Pathology applications in Family Medicine can concern cytological or histological investigations. Histology is also of great importance in Family Medicine, in terms of skin excisions, biopsies and curettings. Skin diseases are a major part of the workload of the family doctor, reflecting about 15% of daily consultations. Skin cancer incidence rates have increased steadily, leading to a growing demand for healthcare services to inspect suspected lesions and treat patients. In The Netherlands, lifetime risk of skin cancer is 1:6 and of melanoma is 1:50. In many countries, including The Netherlands, family doctors are the portal to healthcare and therefore play an important role in handling skin lesions. Nevertheless, the role of family doctors in these matters is not without controversy. Family doctors are criticized because of their lack of diagnostic accuracy and quality of their surgical technique.

To have clear insight into this process it is important to know how family doctors handle skin lesions in daily practice and to know what the role of histopathological investigation is following skin excisions.

We evaluated the yield of histopathological investigation of a large group of 5105 skin excisions performed by family doctors and sent to a family doctors' pathology lab in Utrecht (Saltro), with special emphasis on discrepancies between clinical and pathology diagnoses of malignancy. The total yield of (pre-)malignancies in this large group of skin excisions was about 5%. These (pre-) malignancies were often serious and unexpected.

Table 1. Comparison of clinical and final histological diagnosis in 5105 skin biopsies and excisions by family doctors.

		Final histological diagnosis				
		benign	pre-malignant	malignant	unknown	total
Clinical diagnosis	benign	4302 (96.6%)	34 (0.8%)	100 (2.2%)	16 (0.4%)	4452
	pre-malignant	12 (42.9%)	13 (46.4%)	3 (10.7%)		28
	malignant	66 (50%)	11 (8.3%)	54 (40.9%)	1 (0.8%)	132
	unknown	441 (89.5%)	12 (2.4%)	35 (7.1%)	5 (1%)	493
	total	4821	70	192	22	5105

In the group of benign clinical diagnoses we found 3% (pre-) malignancies. The malignancies occurred over the whole spectrum of clinical diagnoses including epidermal/trichilemmal cyst, seborrhoeic keratosis, naevocellular nevus, verrucous wart and fibroma. This indicates that clinical assessment of skin lesions by family doctors may be insufficiently reliable in allowing some skin excisions to be exempt from histopathological investigation, and that all skin excisions by family doctors deserve to be routinely investigated by histopathology in order not to miss serious malignancies.

We compared melanomas excised by family doctors with those excised by dermatologists and surgeons in an academic practice to identify the nature of melanomas missed by family doctors, which may be translated into better clinical practice for family doctors. Of the family doctor melanomas, 64% were clinically considered to be a benign nevus in contrast with 38% of academic melanomas. This does not necessarily mean that family doctors do worse in diagnosing melanoma, since family doctors will usually refer patients with highly suspicious lesions anyway, and the low index of suspicion lesions will be treated by the family doctors (pre-selection bias). A low index of suspicion will usually lead to a narrow primary excision with a higher risk of an incomplete excision. The general consensus is to refer pigmented lesions with a high index of suspicion to a dermatologist or surgeon for a slightly wider local excision followed by re-excision and sentinel node biopsy if indicated.

In a study exploring whether the “ugly duckling” (UD) sign is sensitive for melanoma detection it was concluded that melanomas are generally apparent as UDs. It is a common observation that, in a given individual, all the nevi tend to show a similar pattern. A nevus that stands out, the ugly duckling, is suspicious. Translating this knowledge to Family Medicine it seems very important to let patients undress when assessing pigmented skin lesions in order to investigate the overall pattern of the skin moles and to detect the “ugly duckling” if present.

The safest approach to skin lesions is to excise them all and submit them for histopathology. However, this would lead to unwanted cosmetic side effects and low cost-effectiveness. Better diagnostic strategies could help family doctors to discriminate between benign lesions that can be left alone and high index of suspicion lesions that need to be excised properly. Dermatoscopy is widespread in secondary care and has been suggested as a tool to improve the diagnostic accuracy and therapeutic management by family doctors as well.

Take Home Messages

- The total yield of (pre-)malignancies in skin excisions submitted for pathology is between 5% and 10%, most of them unexpected, including serious malignancies.
- Unexpected malignancies in skin excisions performed by family doctors occur across all clinical diagnosis categories, and about 2% of clinically 100% benign lesions are malignant.
- Lowering the number of unnecessary excisions is a more fruitful approach to cost-saving than omitting histopathology of excised lesions.
- It seems very important to let patients undress when they present with a pigmented skin lesions to investigate the overall pattern of the skin and to detect the “ugly duckling” if present.
- Dermatoscopy may be a valuable addition for the diagnostic and management strategy of pigmented skin lesions by family doctors.

Original Abstract

<http://www.woncaeurope.org/content/27-pa-minor-surgery-primary-care-team>

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