Impact of Reflectance Confocal Microscopy on lesion assessment: 3-year retrospective review

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1. INTRODUCTION & AIMS

• Reflectance confocal microscopy (RCM) has proven effective for diagnosing melanocytic tumours¹
• Pressure continues to mount on our pigmented lesion services²
• Past studies showed that the majority (64%) of lesions referred to our service in the past were benign with a small number proceeding to biopsy and a fraction of those biopsied turn out to be malignant melanoma (MM)³
• Dermoscopy has reduced the number needed to excise (NNE) computed tomography (CT) to diagnose one MM in the hands of skilled operators⁴
• We aimed to review the impact RCM was having on our lesion service. It has been primarily used in our centre as an ‘add on’ test where lesions are equivocal following clinical examination (including dermoscopy), and a further test is desired which heretofore was excision

2. METHODS

• Retrospective observational study of 3 years data of lesions examined by RCM, comparing RCM impression with outcome (histopathology or not excised)
• Pellacani criteria for MM and Lentigo Maligna (LM) were used to interpret images⁵
• Viva scope 1500 and 3000 (handheld device) were used
• 2 consultants with prior training interpreted images

3. RESULTS

• 302 patients’ results were analysed. Complete data was available for 223 (74%)
• Most lesions examined were melanocytic (69%) and the most common site recorded was on the head and neck (43%)
• Conflonal diagnosis was the same as histological diagnosis in 61% (105/173) of cases, when a lesion was biopsied
• Outcomes- Excision avoided: Following RCM, surgery was avoided in 50/223 lesions (22%) RCM diagnosis in this group in order of frequency
  ➢ benign nevus (40%)
  ➢ seborrhoeic keratosis (SK)/solar lentigo (SL) (28%)
  ➢ scar/recurrence monitoring for previous (LM) (10%)
  ➢ dermatofibroma (4%), congenital nevus (4%) & other (3%)

4. DISCUSSION & CONCLUSION

• Although not designed for this purpose, this review suggests a reduction in NNE for one melanoma from 3.3 to 1.8 with use of RCM as an add on test to clinical examination with dermoscopy
• It was found to be particularly helpful in the head and neck area where surgical morbidity is high. It can help delineate the extent of LM and thus facilitates preoperative planning and informed consent for surgical treatment
• Dimensions of facial skin is particularly suited due to the maximum penetration depth of RCM and the reflectant nature of melanin in characterising LM and its mimics (SL, Pigmented AKs and seborrhoeic keratosis)
• A prospective blinded trial of equivocal pigmented lesions is now planned with particular focus on facial lesions

5. REFERENCES


6. SUPPORT & ACKNOWLEDGEMENTS

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