

THE USE OF PULSED LIGHT (IPL) DEVICES  
FOR PIGMENTARY DISORDERS  
IN THE ASIAN SKIN

Dr BJINDER SINGH A/L JAGJIT SINGH

1001231099

MASTER OF SCIENCE (ANTI-AGEING REGENERATIVE  
MEDICINE AND MEDICAL AESTHETICS)

FACULTY OF MEDICINE AND HEALTH  
SCIENCES

UCSI UNIVERSITY

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## ABSTRACT

Treating pigmentation problems have always posed many challenges especially in the Asian skin types (Fitzpatrick skin types III to V). The objective was to review findings of different studies on the use of the IPLs in treating pigmentation disorders in the Asian skin types. This study is a review of the evidence of the effects of the use of IPL (intense pulsed light) in the treatment of pigmentation disorders. It also seeks evidence of side effects and the safe use of IPL parameters. (fluence, filters, pulse durations and intervals). This study reviewed 7 articles (Interventional and observational were 6, Case Control 1). The inclusion criteria was that the studies should include Randomised control Trials (RCT), case-control studies and interventional or observational. They should address the study question. Studies on pigmentation disorders due to systemic diseases were excluded. The Methods used was an search of online data bases. The data bases were Medline, Pubmed and Science Direct. The key words used for the search were 1. Intense pulsed light, 2. Pigmentation disorders, 3. Asians. The Studies reported variable clinical outcomes. Weaknesses noted in the studies. Included small sample size and were sourced from the patients visiting the practice and were not representative of the population at large. The issues of bias and confounding were not addressed and the research instruments were not validated. The diagnosis and outcomes of the treatment of the pigmentation problems was clinical and observer biased. Most of the studies reported satisfactory patient outcomes of 40% to 60% for pigmentation disorders (Melasma, Lentigenes, Freckles). The machines used were from different manufacturers and the treatment parameters and settings were not standardised. Thus the treatment parameters among different researchers were variable. Generally safe and lower parameters were used. Usually 3 to 6 treatments were given at intervals of 2 to 3 weeks. The mean range of the filters utilised were from 550nm and 570nm, double or triple pulses, fluence range of 30-42J/cm<sup>2</sup>. Pulse duration 2.4 to 3.0ms. Side effects like erythema, flushing and transient pigmentation were reported in of 2% to 5% of the subjects. In conclusion it was found that IPL was safe to use for the treatment of pigmentation problems in the Asian skin. Recommendations include the need for multi-centered Randomised Controlled Trials. Research instruments should be validated and machine manufacturers should follow standardised specifications.