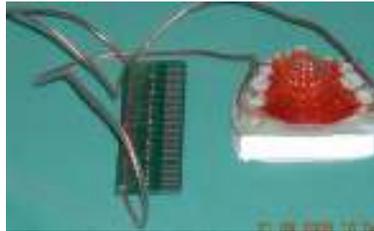


TITLE: DEVELOPMENT OF ELECTROPALATOGRAPH (EPG) ARTIFICIAL PALATE FOR SPEECH THERAPY OF CLEFT LIP AND PALATE CHILDREN

PROJECT LEADER:
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INTRODUCTION:

In Malaysia, the profession of speech and language pathology is still relatively new and there is significant lack of knowledge about speech disorders especially in Malaysian-speaking cleft lip and palate patients. Since the high volume of patients is receiving treatment at the HUSM in Kelantan, it has been a long term goal to establish the hospital as a craniofacial center on the east coast of Malaysia. However, at present many patients do not receive the speech language therapy services they require to manage their condition.

EPG records the timing and location of tongue contacts with the hard palate during continuous speech. The technique requires the speaker to wear an artificial palate that is molded to fit the roof of the mouth. EPG also has a facility to provide real-time visual feedback of tongue-palate contacts, which can be used to monitor articulation as part of a speech therapy programme. EPG is now relatively well-established as a clinical tool, and has been used successfully for articulation disorders such as those associated with developmental and acquired conditions such as dyspraxia, dysarthria, cleft palate and other craniofacial abnormalities, downs syndrome and hearing impairment. Therefore by establishing this new technology in HUSM, it will certainly elevate the standards in managing cleft lip and palate patients.

OBJECTIVES:

- 1) To investigate a group of Kelantanese speaking children with cleft lip and/or palate.
- 2) To develop an EPG artificial palate for speech therapy
- 3) To compare the effect of EPG therapy on normal and cleft subjects

Hypothesis:

There will be a difference in the response of the speech after the EPG therapy on the normal and cleft subject.

ORGANIZATIONAL IMPACT EXPECTED

1. Development of expertise in dental laboratory technology
2. Development of expertise in speech language pathology.
3. Development of speech language protocol that can be used by HUSM and other centres in Malaysia.
4. Recognition of the institutions involved in contributing to the speech language pathology study which is very rarely conducted in other parts of Malaysia. It is hoped that USM will be the referral center for speech language pathology.