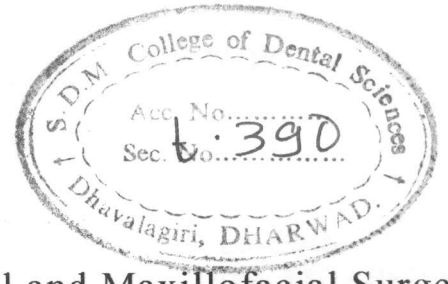
BOTULINUM TOXIN FOR THE TREATMENT OF MASSETERIC HYPERTROPHY

This dissertation is submitted to the Rajiv Gandhi University in partial fulfilment of the requirements for the **Degree of Master of Dental Surgery** in Oral and Maxillofacial Surgery examination of September 2001.



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INTRODUCTION

Massetric hypertrophy is a benign condition characterized by enlargement of the masseter muscle and was described by Legg in 1880[7]. The condition has its highest incidence in second and third decades of life and there is no sex predilection. The etiology is obscure, however most if not all cases, have a clenching / grinding habit of the jaws which is also frequently present during sleep. This habit induces, the hypertrophy of the masseter muscle which are often asymmetric in size and this is the basis of the "work hypertrophy" theory of Gurney[7]. Patients also sometimes complain of a dull aching pain deep within the masseter muscles.

Examination often reveals a square shaped lower face often with asymmetric swellings over the ramus and angles of the mandible, which become more pronounced when the patient is asked to clench the teeth together. Long standing cases exhibit bony changes with hyperostosis resulting in winging of the mandible[19].

The protein botulinum toxin type A is produced by the anaerobic organism Clostridium botulinum. Eight distinct serotypes of botulinum toxin have been recognized; of these, 7 are neurotoxins (type A through G). Of these botulinum neurotoxins, type A is the most potent one. It is the most potent bacterial toxin known to man and is responsible for the clinical infection botulism.