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NAVANVADEE KAEWPALUK : MAXIMUM BITE FORCE IN DIFFERENT CRANIOFACIAL SKELETAL TYPES. THESIS ADVISOR : ISARAVADEE VISETSIRI M.S.D. , SANGIAM PUSAKSRIKIT D.D.S. SUTAT RAKPRASITKUL THAI BOARD OF ORAL MAXILLOFACIAL SURGERY 105 P. ISBN 974-663-954-4

The objectives of this study were to record the molar bite force values with the Digital bite force meter produced by Dr. Somkiat Dujnungkunakorn in 1997. To compare the difference in bite force values among subjects that have vary craniofacial skeletal structures and analyze the relationship between the masticatory bite force and craniofacial structures. The study was carried out in 90 Thai subjects ; craniofacial skeletal type I (ANB 0 – 4 degrees) = 30 subjects, craniofacial skeletal type II (ANB >4 degrees) = 30 subjects and craniofacial skeletal type III (ANB < degrees) = 30 subjects ; age range 17 – 44 years, 32 males, 58 females. Bite force values between male and female were significantly different at 0.05 level. The mean value for the maximum bite force in males was 533 N and 393 N in females . The mean value for the bite force in total subjects was 445 N, 428 N in subjects that have craniofacial skeletal type I, 434 N in type II and 473 N in type III subjects. When considering the bite force in relation to skeletal type, there was no statistical significant difference between bite force and craniofacial skeletal type I,II and III at 0.05 level. There was a highly significant but weak positive correlation between bite force and bizygomatic breadth , lower anterior facial height, lever arm length, Mandibular length, Upper anterior facial height, and upper posterior dental height. ($p < 0.01$) . There was a positive correlation between bite force and load arm length, lower molar arch width, Midface length, and Upper molar arch width ($p < 0.05$) . The bite force was inversly correlated to the mandibular angle and Mandibular plane to palatal plane. ($p < 0.05$) .