Reference range for penile length in Chinese men and their relationship with somatometric parameters: a prospective cohort analysis and establishment of a nomogram Thomas Wong, Chiu-Fung Tsang, Brian Ho, Ada Ng, Wai-Kit Ma, James Tsu, Wayne Lam Division of Urology, Department of Surgery, LKS Faculty of Medicine, Queen Mary Hospital, The University of Hong Kong

INTRODUCTION

- A man's self-esteem may profoundly be - 565 men were eligible. Mean age 66.6 years. affected by perception of his own penile size. Urologists frequently encounter distressed - True micropenis was 7.9cm (2.5SD<mean). patients who are concerned with their penile size and appearance. - Flaccid circumference was positively
- The aim of this study was to establish a reference range and to construct a nomogram for adult penile size in the Chinese population using validated penile dimension measurements.
- Many believed that penile size could be estimated by assessing other parts of the body, as such this study also investigated the relationship of penile dimensions with various somatometric parameters.

OBJECTIVES

To establish a reference range and construct a nomogram for adult male penile size in the Chinese population, and to investigate relationships between penile length and various somatometric parameters.

PATIENTS & METHODS

- Men who required surgery under general or spinal anaesthesia were recruited (May 2018) to December 2019).
- Patients with history of penile deformities were excluded. Standardised, validated penile measurements were recorded.
- Correlations between penile length and somatometric parameters were assessed using Pearson correlation analysis or Student's t-test.

RESULTS

- correlated with BMI (r=0.34), weight (r=0.37), height (r=0.18) and feet size (r=0.25).
- Obese men (BMI>=25) had significantly shorter flaccid pendulous length but longer flaccid circumference than non-obese men, (8.9cm vs 9.6m, p=0.001; 8.3cm vs 7.7cm, p = 0.001), although their stretched flaccid lengths were similar (12.5cm vs 12.8cm, p=0.145).

Figure 1: Distribution of stretched flaccid length (mean 12.8cm, SD ±1.9)





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Table 2: Means and medians of age, body mass index (BMI) and penile dimension measurements

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Figure 2: Nomogram of flaccid circumference measurement



Table 1: Means and medians of age, body mass index (BMI) and penile dimension measurements

	Age (years)	BMI	Flaccid pendulous length (cm)	Pubic arch penile length (cm)	Stretched flaccid length (cm)	Flaccid circumference (cm)
n	66.6	24.3	9.4	11.1	12.8	7.8
	14.0	3.9	1.7	1.8	1.9	1.0
mum	19.0	15.47	3.5	4.8	5.6	5.0
imum	100.0	39.93	14.5	18.0	19.0	11.0

	Flaccid pendulous length	Pubic arch penile length	Stretched flaccid length	Flaccid circumference
ght	-0.42 (P=0.380)	-0.01 (P=0.822)	-0.01 (P=0.828)	0.37 (P<0.001)
ht	0.05 (P=0.295)	0.04 (P=0.435)	0.06 (P=0.223)	0.18 (P<0.001)
	-0.07 (P=0.125)	-0.04 (P=0.400)	0.05 (P=0.308)	0.34 (P<0.001)
dle finger	0.08 (P=0.088)	0.04 (P=0.398)	0.06 (P=0.212)	0.03 (P=0.587)
finger	0.08 (P=0.083)	0.01 (P=0.747)	0.04 (P=0.393)	-0.01 (P=0.923)
d width	-0.05 (P=0.309)	-0.10 (P=0.046)	-0.09 (P=0.072)	0.10 (P=0.050)
e size	-0.01 (P=0.855)	-0.01 (P=0.917)	0.02 (P=0.656)	0.25 (P<0.001)
tate size on S (n=168)	0.87 (P=0.263)	0.10 (P=0.210)	0.17 (P=0.029)	0.143 (P=0.068)

Figure 3: Combined nomogram of flaccid pendulous length, pubic arch penile length, and stretched flaccid



- We established the first penile length nomogram specifically for the Chinese adult population. This will help counsel patients with penile length concerns, or those who require penile reconstructive surgery that may impact on penile size.

- Weight loss should be advised to increase flaccid penile length in patients who are concerned.





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CONCLUSIONS