

BRIEF REPORTS

- tronic excitation state(s) in human polymorphonuclear leucocytes and its participation in bactericidal activity. *Biochem Biophys Res Commun* 1972, 47: 679-684.
2. Wilson ME, Trush MA, Dyke KV, *et al.* Luminol dependent chemiluminescence analysis of opsonophagocytic dysfunction. *J Immunol Meth* 1978, 23: 315-326.
 3. Stejernholm RL, Allen RC, Steele, RH, Waring, WW Harris CA. Impaired Chemiluminescence during phagocytosis of opsonized bacteria. *Infect Immunol* 1973,7: 313-314.
 4. Rosen H, Klepanoft SJ. Chemiluminescence and superoxide production by myeloperoxidase deficient leucocytes. *J Clin Invest* 1976, 58: 50-60.
 5. Bachner RL, Kamovsky, MJ, Karnorsky ML. Degranulation of leucocytes in chronic granulomatous disease. *J Clin Invest* 1969, 48: 187-192.
 6. Stevens P, Young LS. Quantitative granulocyte chemiluminescence in the rapid detection of impaired opsonization of *Escherichia coli*. *Infect Immunol* 1977,16: 796-804.
 7. Hill HR, Gerrard JM, Hogan NA, Quie PC. Hyperactivity of neutrophil leucotactic responses during acute bacterial infection. *J Clin Invest* 1974, 53: 996-1002.

Anthropometric Data in Term Newborns

N. Singh
R. Gupta

Many anthropometric studies have been conducted with a view to establish the criteria for prematurity. We report some anthropo-

From the Department of Pediatrics, Medical College, Amritsar.

Reprint requests: Dr. Narinder Singh, Professor and Head, Department of Pediatrics, Medical College, Amritsar.

Received for publication: November 13, 1992;
Accepted: December 27, 1993

metric data measured on 1000 consecutive term normal birth weight neonates.

Material and Methods

The measurements made with the measuring tape included total arm length from tip of the acromian to the tip of middle finger, upper arm length from tip of acromian to the tip of olecranon with elbow bent at 90°, lower arm length from tip of olecranon to the styloid process, leg length from lateral femoral condyle to the lateral malleolus with leg flexed at popliteal angle of 90° and thigh circumference at the level of maximum projection of medial surface below the gluteal sulcus and at right angle to the long axis of thigh. The measurements with the Vernier callipers included hand length from distal wrist crease to the tip of middle finger, hand breadth from the root of the thumb along a horizontal line across the palm, little finger length from the first phalanx to the tip, elbow width as distance between the most lateral point of lateral

epicondyle of humerus and most medial part of medial epicondyle of humerus with elbow bent at 90°, knee width from the most lateral point of lateral epicondyle of femur to the most medial point of medial epicondyle with knee at 90°, foot length from posterior prominence of heel to the tip of big toe maintained in straight position and length of ear pinna from the highest point on the pinna to the lowest point of

lobule. All measurements were done on the right side of the body.

Results and Discussion

The results of the present study (*Table I*) are largely in conformity with earlier published work(1-5). There are, however, no comparative normative data for hand, elbow and knee width.

TABLE I—Mean (SD) Anthropometric Data for Term Neonates

Anthropometric measurements (cm)	Males	Females	Combined
Arm length	20.8 (1.4)	20.7 (1.6)	20.8 (1.8)
Upper arm length	10.0 (0.8)	9.9 (0.2)	10.0 (1.0)
Lower arm length	7.8 (0.1)	7.8 (0.3)	7.7 (0.6)
Leg length	10.0 (1.0)	10.0 (1.3)	9.9 (1.7)
Thigh circumference	16.2 (1.9)	16.0 (2.0)	15.1 (1.7)
Hand length	7.1 (0.4)	6.9 (0.4)	7.0 (0.4)
Hand width	3.7 (0.5)	3.6 (0.6)	3.6 (0.3)
Little finger length	2.5 (1.2)	2.5 (0.8)	2.5 (1.2)
Elbow width	2.5 (0.3)	2.5 (0.9)	2.5 (0.8)
Foot length	8.5 (1.4)	8.2 (2.4)	8.3 (1.5)
Knee width	3.5 (0.5)	3.5 (0.7)	3.5 (0.8)
Ear pinna length	3.9 (0.8)	3.8 (0.6)	3.8 (0.6)

REFERENCES

1. Sharma JN, Saxena S, Sharma U. Thigh circumference at birth as the best predictor of low birth weight babies. *Indian Pediatr* 1989, 26: 18-21.
2. Madhulika, Kabra SK, Barbar V, Purohit A, Saxena S, Sharma U, Bansal RK. Upper and lower limb standards in newborn. *Indian Pediatr* 1989, 26: 667-670.
3. Sivan Y, Merlob P, Reisner SH. Upper limb standards in the newborns. *Am J Dis Child* 1983, 137: 829-832.
4. Merlob P, Sivan Y, Reisner SH. Lower limb standards in the newborns. *Am J Dis Child* 1984, 138: 140-142.
5. Kulkarni, Rajendran NK. Values for foot length in newborn. *Indian Pediatr* 1992, 29: 507-509.