level after removal of the gastrinoma. The levels remained within the normal range for 6 months after surgery.

REFERENCES

1. No-ton JA, Collen MJ, Gardner JD, *et al.* Prospective study of gastrinoma localization and resection in patients with Zollinger-Ellison syndrome. Ann Surg 1986, 204: 468-479.
2. Wolfe MM, Alexander RW, McGuigan JE. Extra-pancreatic, extra-intestinal gastrinoma-effective treatment by surgery. N Eng J Med 1982, 306: 1533-1536.
3. Bhagwan BS, Slavin RE, Goldberg J, Rao RN. Ectopic gastrinoma and Zollinger-Ellison syndrome. Human Pathol 1986, 17: 584-592.
4. Ellison EH, Wilson SD. The Zollinger-Ellison syndrome: reappraisal and evaluation of 260 registered cases. Ann Surg 1964,160: 512-530.
5. Wilson SD. Ulcerogenic tumors of the pancreas: The Zollinger-Ellison syndrome. *In:* The Pancreas. Ed Caray LC, St. Louis, CV Mosby, 1973, pp 295-318.
6. Walsh JH, Grossman MI. Gastrin. N Engl J Med 1975, 292: 1324-1334.
7. Vinayak R, Frucht H, Chiang HCV, Gardner JD, Jensen RT. Zollinger-Ellison syndrome: Recent advances in the management of gastrinoma. Gastroenterol Clin North Am 1990, 19: 197-217.

Penile Agenesis

Penile agenesis is a rare clinical entity with a reported incidence of 1 in 10 to 1 in 30 million births(l). The prognosis depends not only on the associated cardiac or renal anomalies but also on the location of the urethral opening(2). The urethral opening is either present in front of the anal opening through a skin tag or in anterior wall of anal canal. The anomaly may be due to a deficient formation of the genital tubercle or failure of development of the upper cloacal structures at and above the level of entry of the mesonephric ducts at 6 weeks of intrauterine life. We have seen two neonates with complete absence of penis but absolutely normally developed scrotum and bilaterally descended normal sized testes *(Fig. 1)*. The babies were passing meconium through a normally located anus, and urine through a separate opening just in front of the anus in one, and in the anterior wall of the anal canal in the other. Both babies had normal intravenous urography and renal ultrasound scans. Sex identity was established by Barr body, positive Y-chromosome and normal 46 XY karyotype.

On account of the practical problems of reconstructing a normally functioning penis, one of the option is to manage such babies by rearing them as females, after performing bilateral orchidectomy and infolding the

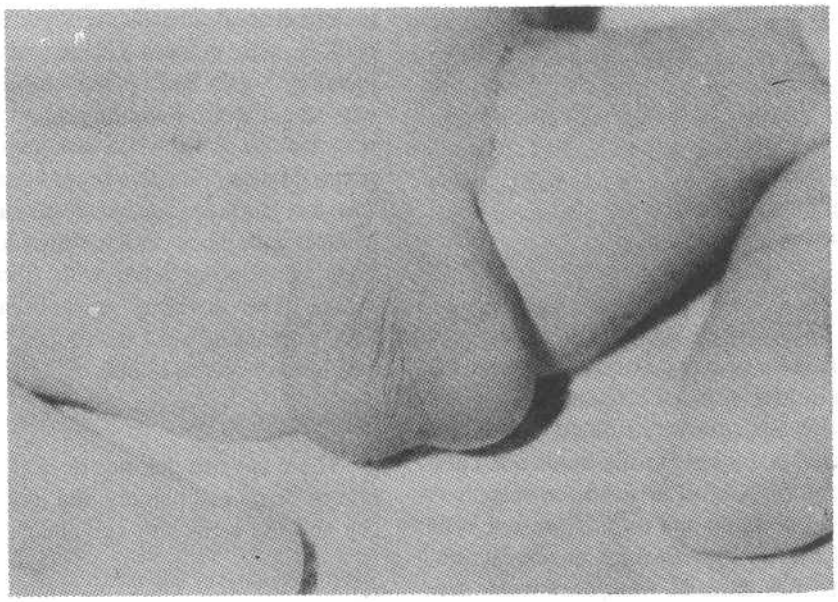

Fig. 1. Clinical photograph showing complete penile agenesis but fully developed scrotum with bilaterally descended normal size testes.

scrotal skin for labial reconstruction. Subsequently, vaginoplasty and estrogen therapy for normal feminine contour is required.

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REFERENCES

1. Kessler WO, McLaughhn AP. Agenesis of penis—embryology and management. Urology 1973, 1: 33-39.
2. Skoog SJ, Belman AB. Aphallia-its classification and management. U Urol 1989, 141: 589.