

Laparoskopie u nehmamatných varlat

KALPNA K. PATIL, JAMES S.A. GREEN* a PATRICK G. DUFFY†

Departments of Paediatric Urology, Guy's & St Thomas' Hospital NHS Trust, *Whipps Cross University Hospital NHS Trust and †Great Ormond Street Hospital for Children NHS Trust, London, UK

LITERATURA

- 1 Levitt SB, Kogan SJ, Engel RM, Weiss RM, Martin DC, Ehrlich RM. The impalpable testis: a rational approach to management. *J Urol* 1978; **120**: 515-20
- 2 Scott JES. Laparoscopy as an aid in the diagnosis and management of the impalpable testis. *J Urol* 1982; **17**: 14-6
- 3 Cain MP, Garra B, Gibbons MD. Scrotalinguinal ultrasonography: a technique for identifying the nonpalpable inguinal testis without laparoscopy. *J Urol* 1996; **156**: 791-4
- 4 Flett ME, Jones PF, Youngson GG. Emerging trends in the management of impalpable testes. *Br J Surg* 1999; **86**: 1280-3
- 5 Flach A. Anatomical aspects of maldescensus testis. In: *Maldescensus Testis. Colloquium at Tübingen*. Baltimore: Urban and Schwarzenberg, 1977: 13-6
- 6 Tibbs DJ. Unilateral absence of testes. Eight cases of true monorchism. *Br J Surg* 1961; **48**: 601-8
- 7 Jones PG. Undescended testes. *Aust Paed J* 1966; **2**: 36-48
- 8 Abeyaratne MR, Aherne WA, Scott JES. The vanishing testis. *Lancet* 1969; **2**: 822-4
- 9 Diamond DA, Caldamone AA. The value of laparoscopy for 106 impalpable testes relative to clinical presentation. *J Urol* 1992; **148**: 632-4
- 10 Hazeboek FWJ, Molenaar JC. The management of impalpable testis with surgery alone. *J Urol* 1992; **148**: 629-31
- 11 Pearman ROJ. Congenital absence of the testicle: monorchism. *J Urol* 1961; **85**: 599-601
- 12 Gross RE, Jewett Jr. Surgical experiences from 1,222 operations for undescended testes. *JAMA* 1956; **160**: 634-41
- 13 Curtis MS, Staggers FE. Treatment of undescended testes with special reference to pathological anatomy. *Med Arch* 1960; **83**: 693-6
- 14 Silber SJ, Cohen R. Laparoscopy for cryptorchidism. *J Urol* 1980; **124**: 928-9
- 15 Borrow M, Gough MH. Bilateral absence of testes. *Lancet* 1970; **14**: 366
- 16 Aynsley-Green MR, Zachmann M, Illig R, Rampini S, Prader A. Congenital bilateral anorchia in childhood. a clinical, endocrine and therapeutic evaluation of twenty-one cases. *Clin Endocrinol* 1976; **5**: 381-91
- 17 Moore RG, Peters CA, Bauer SB, Mandell J, Retik A. Laparoscopic evaluation of the nonpalpable testis: a prospective assessment of accuracy. *J Urol* 1993; **151**: 728-31
- 18 Cortes D, Lenz TK, Beck BL, Nelson OH. Laparoscopy in 100 consecutive patients with 128 impalpable testes. *Br J Urol* 1995; **75**: 281-7
- 19 Bartone FF, Huseman CA, Maizels M, Firlik CF. Pitfalls in using human chorionic gonadotropin stimulation test to diagnose anorchia. *J Urol* 1984; **132**: 563-7
- 20 Davenport M, Brain C, Vandenberg C et al. The use of the hCG stimulation test in the endocrine evaluation of cryptorchidism. *Br J Urol* 1995; **76**: 790-4
- 21 Budowski TP, Sedberry S, Richardson B. Is human chorionic gonadotropin useful for identifying and treating nonpalpable testis? *J Urol* 2001; **165**: 221-3
- 22 Hjertqvist M, Lackgreen G, Ploen L, Bergh A. Does HCG treatment induce inflammation - like changes in undescended testes in boys? *J Pediatr Surg* 1993; **28**: 254-8
- 23 Kerr JB, Sharpe RM. Focal disruption of spermatogenesis in the testis of adult rats after a single administration of human chorionic gonadotropin. *Cell Tissue Res* 1989; **257**: 163-9
- 24 Hedestrom E, Forstberg L, Kullendorff CM. Ultrasonography of the undescended testis. *Acta Radiologica* 1985; **26**: 453-6
- 25 Weiss RM, Carter AR, Rosenfield AT. High resolution real-time ultrasonography in the localisation of undescended testes. *J Urol* 1996; **155**: 936-8
- 26 Madrazo BL, Klugo RC, Parks JA, DiLoreto R. Ultrasonographic demonstration of undescended testis. *Radiology* 1979; **133**: 181-3
- 27 Wolverton MK, Houttuin E, Heiberg E, Sundaram M, Shields JB. Comparison of computed tomography and high resolution real-time

- ultrasound in the localisation of the impalpable undescended testis. *Radiology* 1983; **146**: 133-6
- 28 Rajfer J, Tauber A, Zinner N, Naftulin E, Worthen N. The use of computed tomography scanning to localise the impalpable testis. *J Urol* 1983; **129**: 972-4
- 29 Kier R, McCarthy S, Rosenfield AT *et al.* Nonpalpable testes in young boys: Evaluation with MR Imaging. *Radiology* 1988; **169**: 429-33
- 30 Yeung CK, Tam YH, Lee KH, Metreweli C. A new management algorithm for impalpable testes with gadolinium enhanced magnetic resonance angiography. *J Urol* 1999; **162**: 998-1002
- 31 Lam WW, Tam PK, Chan KL, Chan FL, Leong L. Using gadolinium-infusion MR venography to show the impalpable testis in pediatric patients. *Am J Roentgenol* 2001; **176**: 1221-6
- 32 Hrebrink RL, Bellinger MF. The limited role of imaging techniques in managing children with undescended testes. *J Urol* 1993; **150**: 458-60
- 33 Lee JKT, McClellan BL, Stanley RJ, Sagel SS. Utility of computed tomography with high resolution real time ultrasound in the localisation of the impalpable testis. *Radiology* 1980; **135**: 121-5
- 34 Glickman MG, Weiss RM, Itzchak Y. Testicular venography for undescended testis. *AJR* 1977; **129**: 67-70
- 35 Diamond AB, Meng CH, Kodroff M, Goldman SM. Testicular venography in the nonpalpable testis. *AJR* 1977; **129**: 71-5
- 36 Khademi M, Seebode JJ, Falla A. Selective spermatic arteriography for localisation of an impalpable undescended testis. *Radiology* 1980; **136**: 627-34
- 37 Cortesi N, Ferrari P, Zambarda E *et al.* Diagnosis of bilateral cryptorchism by laparoscopy. *Endoscopy* 1976; **8**: 33-4
- 38 Castilho LN. Laparoscopy for the impalpable testis: How to interpret the endoscopic findings. *J Urol* 1990; **144**: 1215-8
- 39 Castilho LN, Ferreira U. Laparoscopy in adults and children with nonpalpable testes. *Andrologia* 1987; **19**: 539-43
- 40 Tennenbaum SY, Lerner SE, McAleer IM *et al.* Preoperative laparoscopic localisation of the nonpalpable testis: a critical analysis of a ten year experience. *J Urol* 1994; **151**: 732-4
- 41 Malone PS, Guiney EJ. The value of laparoscopy in localising the impalpable testis. *Br J Urol* 1984; **56**: 429-31
- 42 Wilson-Storey D, MacKinnon AE. The laparoscope and the undescended testis. *J Pediatr Surg* 1992; **27**: 89-92
- 43 Humphrey GM, Najmaldin AS, Thomas DF. Laparoscopy in the management of the impalpable undescended testis. *Br J Surg* 1998; **85**: 983-5
- 44 Galvin DJ, Bredin H. The role of laparoscopy in the management of the impalpable testicle. *Irish J Med Sci* 2002; **171**: 73-5
- 45 Baillie CT, Fearn G, Kitteringham L, Turnock RR. Management of the impalpable testis: the role of laparoscopy. *Arch Dis Child* 1998; **79**: 419-22
- 46 Vassye P. Laparoscopy and impalpable testes - A prospective multicentric study (232 cases). *Eur J Pediatr Surg* 1994; **4**: 329-32
- 47 Ferro F, Lais A, Gonzalez-Serva L. Benefits and afterthoughts of laparoscopy for the impalpable testis. *J Urol* 1996; **156**: 795-8
- 48 Zaccara A, Spagnoli A, Capitanucci ML, Villa M, Lucchetti MC, Ferro F. Impalpable testis and laparoscopy: when gonad is not visualised. *J SLS* 2004; **8**: 39-42
- 49 Bhowmick SK, Gidvani VK. Pitfalls in the conventional human chorionic gonadotropin stimulation test to detect hormonally functional cryptorchid testes in midchildhood. *Endocr Pract* 2000; **6**: 112-4
- 50 Christiansen P, Anderson AM, Skakkebaek NE, Juul A. Serum inhibin B, FSH, LH and testosterone levels before and after human chorionic gonadotropin stimulation in prepubertal boys with cryptorchidism. *Eur J Endocrinol* 2002; **147**: 95-101
- 51 Elder J. Laparoscopy for impalpable testes. significance of the patent processus vaginalis. *J Urol* 1994; **152**: 776-8
- 52 Kerem B, Rommens JM, Buchanan JA. Identification of the cystic fibrosis gene: genetic analysis. *Science* 1989; **245**: 1073-80
- 53 Heaton ND, Pryor JP. Vasa aplasia and cystic fibrosis. *Br J Urol* 1990; **66**: 538-40
- 54 Kaplan E, Swachman H, Perlmutter AD *et al.* Reproductive failure in males with cystic fibrosis. *N Engl J Med* 1968; **279**: 65-9
- 55 Holsclaw DS, Perlmutter AD, Jockin H, Shwachman H. Genital abnormalities in male patients with cystic fibrosis. *J Urol* 1971; **106**: 568-74
- 56 Denning CR, Sommers SC, Quigley HJ. Infertility in male patients with cystic fibrosis. *Pediatrics* 1968; **41**: 7-17
- 57 Ashley DJB, Mostofi FK. Renal agenesis and dysgenesis. *J Urol* 1960; **83**: 211-30
- 58 Ferro F, Lais A, Bagolan P, Talamo M, Caterino S. Impact of primary surgical approach in the management of impalpable testes. *Eur Urol* 1992; **22**: 142-6

- 59 Bogaert GA, Kogan BA, Mevorach RA. Therapeutic laparoscopy for intraabdominal testes. *Urology* 1993; **42**: 182-8
- 60 Holcomb GW, Brock JW, Neblett WW III, Pritch JB, Morgan WM. Laparoscopy for the impalpable testes. *Am Surg* 1994; **60**: 143-7
- 61 Krabbe S, Berthelsen JG, Volsted P et al. High incidence of undetected neoplasia in maldescended testes. *Lancet* 1979; **12**: 999-1000
- 62 Gilbert JB, Hamilton JB. Studies in malignant testis tumours. III Incidence and nature of tumours in ectopic testis. *Surg Gynecol Obstet* 1940; **71**: 731-43
- 63 Campbell HE. Incidence of malignant growth of the undescended testicle. A critical and statistical study. *Arch Surg* 1942; **44**: 353-69
- 64 Puri P, O'Donnell B. Semen analysis of patients who had orchidopexy at or after seven years of age. *Lancet* 1988; **ii**: 1051-2
- 65 Zukerman ZVJ, Rodriguez-Riyau LJ, Smith KD et al. Frequency distribution of sperm counts in fertile and infertile males. *Fertil Steril* 1977; **28**: 1310-3
- 66 Sherif DS. Setting standards of male fertility. I. Semen analysis in 1500 patients - a report. *Andrologia* 1983; **15**: 687-92
- 67 Hadziselimovic F, Herzog B. Development of cryptorchid testis. *Eur J Pediatrics* 1987; **146** (Suppl. 2): S53-5
- 68 Hedinger CE. Histopathology of undescended testes. *Eur J Pediatr* 1982; **139**: 266-71
- 69 Zerella JT, McGill LC. Survival of nonpalpable undescended testicles after orchidopexy. *J Pediatr Surg* 1993; **28**: 251-3
- 70 Stone JM, Cruickshank DG, Sandeman TF et al. Laterality maldescent, trauma and other clinical factors in the epidemiology of testis cancer in Victoria, Australia. *Br J Cancer* 1991; **64**: 132-8
- 71 Pike MC, Chilvers C, Peckham MJ. Effect of age at orchidopexy on risk of testicular cancer. *Lancet* 1986; **31**: 1246-8
- 72 Martin DC. Germinal cell tumours of the testis after orchidopexy. *J Urol* 1979; **121**: 422-4
- 73 Dow JA, Mostofi FK. Testicular tumours following orchidopexy. *South Med J* 1967; **60**: 193-5
- 74 Martin DC. Malignancy and the undescended testis. In Fonkalsrud EW, Mengel W eds. *The Undescended Testis*. London: Year Book Medical, 1981: 144-56
- 75 Brendler H, Wulfsohn MA. Surgical treatment of the high undescended testis. *Surg Gynecol Obstet* 1967; **124**: 605-8
- 76 Fowler R, Stephens FD. The role of testicular vascular anatomy in the salvage of the high undescended testes. *Aust New Zeal J Surg* 1959; **29**: 92-105
- 77 Ransley PG, Vordermark JS, Caldamone AA, Bellinger MF. Preliminary ligation of the gonadal vessels prior to orchidopexy for the intra-abdominal testicle. A staged Fowler-Stephens procedure. *World J Urol* 1984; **2**: 266-8
- 78 Ferro F, Inon A, Caterino S, Lais A, Inserra A. Staged orchidopexy simplifying the second stage. *Ped Surg Int* 1990; **5**: 10-2
- 79 Silber S, Kelly J. Successful autotransplantation of the intraabdominal testis to the scrotum by microvascular technique. *J Urol* 1976; **115**: 452-4
- 80 McCO'Brien B, Rao VK, MacLeod AM, Morrison WA, MacMohan RA. Microvascular testicular transfer. *Plastic Reconstructive Surg* 1983; **17**: 87-90
- 81 Bianchi A. Microvascular orchipexy for high undescended testes. *Br J Urol* 1984; **56**: 521-4
- 82 Upton J, Schuster SR, Colodny AH, Murray JE. Testicular autotransplantation in children. *Am J Surg* 1983; **145**: 514-9
- 83 Kirsch AJ, Escala J, Duckett JW et al. Surgical management of the nonpalpable testis: the Children's Hospital of Philadelphia experience. *J Urol* 1998; **159**: 1340-3
- 84 Lawson A, Gornall P, Buick RG, Corkery J. Impalpable testis: testicular vessel division in treatment. *Br J Surg* 1991; **78**: 1111-2
- 85 King LR. Editorial. Optimal treatment of children with undescended testes. *J Urol* 1984; **134**: 734-5
- 86 Baker LA, Docimo SG, Surer J et al. A multi-institutional analysis of laparoscopic orchidopexy. *BJU Int* 2001; **87**: 484-9

Korespondence:

Mrs Kalpana K. Patil,
Department of Paediatric Urology,
Guy's & St. Thomas' Hospital NHS
Trust, St. Thomas Street, London
SE1 9RT, UK. e-mail:
kalpanak@aol.com

Zkratky: IT, impalpable testis; PV, processus vaginalis; FS, Fowler-Stephens; hCG, human chorionic gonadotrophin