(testicular feminisation syndrome).¹ It's not that my gynaecologist told me the truth that angers me (I'd used medical libraries to reach a diagnosis anyway) but that neither I nor my parents were offered any psychological support but were left to flounder in our separate feelings of shame and taboo.

I believe young girls with androgen insensitivity syndrome would be happier not knowing of their male genetic or gonadal status, but a conspiracy of silence cannot guarantee blissful ignorance. The human psyche will be drawn to the truth of things that threaten it, even if it means severe psychological pain. Unless parents can talk openly at the time of diagnosis with a professional counsellor (not a doctor) and are given information—on what and when to tell their child, contacts with other sufferers, sources of counselling or psychotherapy, the timing of gonadectomy or hormone replacement therapy, vaginoplasty techniques, etc—they will become imprisoned by their own feelings, leading to isolation and inaction. The client's condition will be regarded as a lost cause, or something too terrible to ever mention in the family, let alone to outside professionals who otherwise might have helped. Those parents who forbid disclosure possibly seek to protect themselves and will probably also fail later to take action which could be vital to their daughter. This could be far more damaging than truth disclosure in a caring, supportive environment, with time to dissipate the threat by discussion.

Paediatricians should also be alert to vaginal agenesis in the complete form of the syndrome. I lived alone in fear and gender confusion with my self discovered deficiency from age 10 (after my parents had told me a neonatal hernia repair had indicated "a problem, with no likelihood of menstruation or babies") until late diagnosis at 18. I am angry that the complications (stenosis) of one technique only (McIndoe) were then repeatedly used by clinicians to deny me a vaginoplasty and hence the right to express my sexuality in young adulthood (the "stenosis free" Baldwin technique has been around since 1904). I am now 46, and after two late vaginoplasty operations (McIndoe and Williams) still have only a short, partly "externalised" vagina. Today's high profile women's medicine still cannot guarantee one of the most fundamental attributes of womanhood.

Infertility has been the least of my problems. Dr John Money, a world expert on the psychology of sexuality and sexual disorders, cites pairbondage (parent-child and sexual lover-lover bonding) as the first of the five "universal exigencies" or pressing human necessities and emphasises the "enormous anxieties felt in this area of life by young people with birth defects of the sexual organs."² The ability to have babies is not included within any of the five categories. The recent failure of my first real relationship has at last forced me to seek psychological help, after a lifetime of unnecessary secrecy, shame, delayed action, and great damage to my personal and sexual identity and self esteem.

Support groups that may be useful include:

Androgen Insensitivity Syndrome (AIS) Support Network, c/o Mrs Jackie Burrows, 2 Shirburn Avenue, Mansfield, Nottinghamshire NG18 2BY. Tel: 0623 661749.

Vaginoplasty Support Network (North), c/o Sheila Naish, Royd Well Counselling, 35 Royd Terrace, Hebden Bridge, West Yorkshire HX7 7BT. Tel: 0422 845304.

Vaginoplasty Support Network (South), c/o Hilary Everett, Gynaecology Social Worker, Social Services Department, St Bartholomew's Hospital, London EC1A 7BE. Tel: 071 601 8718.

1 Once a dark secret. *BMJ* 1994;308:542. (19 February.)

2 Money J. Psychologic considerations in patients with ambisexual development. *Seminars in Reproductive Endocrinology* 1987;5: 307-13.

Suprapubic aspiration in children

Pyuria is a poor predictor of infection

EDITOR,—Heloise Buys and colleagues have shown that suprapubic aspiration of urine in neonates and young children is a safe procedure and yields good quality specimens.¹ Their study confirms the value of bacteriuria as a predictor of urinary tract abnormality in this age group. Analysis of their data also supports our view that pyuria is a poor predictor of urinary tract infection. Thus of 545 specimens examined, 439 were sterile and contained no pus cells and 60 were sterile but contained pus cells; of the 46 that were positive on culture, 24 contained pus cells. The sensitivity of pyuria for detecting bacteriuria is 52% (24/46); the specificity is 88% (439/499). Only 24 of 84 pyuric samples were bacteriuric. The positive predictive value of pyuria for bacteriuria in this study is therefore 29% (24/84), indicating that in this population pyuria is a poor predictor of infection. The absence of pyuria does predict negative urine cultures (negative predictive value 95%), but this is of limited practical use if half of infected specimens are missed. It is not clear from the data presented by Buys and colleagues whether sterile pyuria predicts urinary tract abnormalities as only 13 of 60 (22%) of such cases were investigated, and it is not stated how many of those had evidence of bacteriuria at other times.

It is the policy of our department to discourage requests for urine microscopy by clinicians wishing to diagnose urinary tract infection, though not for other purposes such as assessing renal disease.² We believe that microscopic examination is rarely useful in uncomplicated urinary tract infection. As this study shows, the presence of pus cells does not predict infection. If the decision to treat urinary infection is made on the basis of pyuria, many patients will receive unnecessary antibiotics, and treatment would be delayed in other, infected patients (nearly half in this study) while the results of culture are awaited. Another study has shown better results when urinary bacteria were examined microscopically. However, the level of bacteriuria (> 10⁷ bacteria/ml) detected with this method means that many of the infected samples reported by Buys and colleagues would be missed. We recommend that the diagnosis of urinary tract infection should be made on the results of bacterial culture of a carefully collected specimen, and that the decision to treat be based on clinical grounds rather than the detection of pyuria.

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1 Buys H, Pead L, Hallett R, Maskell R. Suprapubic aspiration under ultrasound guidance in children with fever of undiagnosed cause. *BMJ* 1994;308:690-2. (12 March.)

2 Mond NC, Gruneberg RN, Smellie JM. Study of childhood urinary tract infection in general practice. *BMJ* 1970;i:602-5.

3 Vickers D, Ahmad T, Coulthard MG. Diagnosis of urinary tract infection in children: fresh urine microscopy or culture. *Lancet* 1991;338:767-70.

Use of ultrasound guidance unclear

EDITOR,—Heloise Buys and colleagues reported performing ultrasound guided suprapubic aspiration in children with non-specific febrile illness.¹ I was intrigued that "suprapubic aspiration was uniformly successful, and no ill effects were seen" and by the term ultrasound guidance. It was not clear whether ultrasound was used merely to identify the presence of a full bladder and the best approach for aspiration or whether real time ultrasound guidance was used to visualise the bladder

puncture and needle tip. The second technique is much more difficult and requires a degree of skill in using ultrasound techniques. It is also not clear whether attempts were made at aspiration if the bladder was seen but not full. If this were so, contamination of the urine specimen by bowel luminal contents may have accounted for some of the "bacteriuria" noted. Loops of bowel frequently overlie the bladder when it is not fully distended, and they may have been punctured. Therefore, was the aspiration uniformly successful?

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1 Buys H, Pead L, Hallett R, Maskell R. Suprapubic aspiration under ultrasound guidance in children with fever of undiagnosed cause. *BMJ* 1994;308:690-2. (12 March.)

Authors' reply

EDITOR,—The ultrasound equipment and techniques used in suprapubic aspiration are not sophisticated. We use an ATL Mark 100 with a 5 MHz probe, made redundant for diagnostic use by our imaging department on purchase of a more modern machine. Ultrasound is used to show the presence of urine in the bladder, and direct needle aspiration is carried out when urine in the bladder is clearly seen. Visualisation of the needle tip is not attempted.

The technique used is as described by O'Callaghan and McDougall.¹ They found that when the bladder of neonates was shown to contain urine, suprapubic aspiration was successful on first attempt in all cases, but without prior scanning urine was obtained in only 36% of first attempts. They also noted that the techniques can be taught to resident medical staff in less than 10 minutes. Our experience has been similar.

None of the cultures obtained suggested bowel contamination. Even when low bacterial counts are obtained on suprapubic aspiration, subsequent radiological investigation may reveal abnormalities.

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1 O'Callaghan C, McDougall PN. Successful suprapubic aspiration of urine. *Arch Dis Child* 1987;62:1072-3.

Diet and smoking habits

EDITOR,—The investigations of Barrie M Margetts and Alan A Jackson into the eating habits of smokers cast new light on the problem of passive smoking and the toxicity of environmental tobacco smoke.¹ More than 50 epidemiological studies have investigated the risk of lung cancer, heart disease, and other diseases in relation to exposure to environmental tobacco smoke among adults who have never smoked. Positive correlations were found in some but not all of these studies.² Increased risks among non-smokers exposed to environmental tobacco smoke seem unlikely because lung cell doses in these people are probably only 1/10 000 to 1/100 000 of those in average mainstream smokers.³

The possibility that confounding factors that were not previously controlled for caused the increased risks cannot be ruled out. One important