

THE MEDICAL MANAGEMENT OF MALE INFERTILITY*

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The various managements are summarized in Table I.

If the diagnosis is known and specific treatment is available results can be excellent. The best example is when infertility is secondary to pituitary insufficiency where replacement therapy with gonadotrophins (Pergonal and HCG) usually results in restoration of spermatogenesis. However this condition is rare. Men with paraplegia can have regular ejaculation induced by vibrators or electro ejaculation and the semen can be used for artificial insemination. The results are good¹. Artificial insemination using the husband's sperm is also appropriate where physical deformity prevents intercourse, and again success rates are good.

TABLE I
Medical Management of Male Infertility

Diagnosis known and treatment available	<u>Fertility following treatment</u>
Pituitary insufficiency	Good
Paraplegia	Good
Diagnosis known but no treatment	
Klinefelter's syndrome	(No treatment)
Azoospermia associated with testis damage (usually Del Castillo syndrome)	(No treatment)
Kartagener's syndrome	(No treatment)
Probable diagnosis but treatment imprecise	
Infection	Variable
Antisperm antibodies	Variable
Retrograde ejaculation	Variable
Diagnosis unknown and treatment empirical	
Oligozoospermia	Poor

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In cases of azoospermia associated with testicular damage (the majority of such cases belong to the Del Castillo syndrome) and in cases with Klinefelter's syndrome, although the diagnosis is known, there is no treatment for the infertility. Men with Klinefelter's syndrome may need androgen replacement therapy to maintain libido and sometimes potassium supplements to overcome lethargy. Men with Kartagener's syndrome (dextrocardia and sperm immotility) have immotile sperm because of defects in the microstructure of the sperm tail; however, if these sperm are in the laboratory placed in juxtaposition to an egg, fertilization can take place despite the absence of motility. It is therefore possible in the future that this rare condition may be treated by **in vitro** techniques.

Antisperm antibodies and retrograde ejaculation are often cited as precise diagnoses although the laboratory tests and criteria for these diagnoses are not yet precise. It is for this reason that treatment results are variable. Antisperm antibodies can at present only be diagnosed by imprecise agglutination and immobilization tests. The nature of the antibodies has not yet been precisely determined, and there may be several types of antibody involved. Some success² has been reported with high dose steroid therapy, but the complications reported include hematemesis and aseptic hip necrosis, and the reported results of treatment do not yet stand scientific scrutiny.

The diagnosis of infection is also problematical because it is hard to distinguish between commensal organisms and pathogenic ones and difficult to distinguish white cells in the ejaculate from immature sperm forms. There may also be regional variations in the incidence of infection and regional variations in the availability of treatment for venereal disease. If there are clinical symptoms of infection or venereal disease then appropriate antibiotic treatment should be given. The problem remains about how many men have sub-clinical infection. It is my practice to prescribe antibiotics (1) if there are clinical symptoms, and (2) if the sperm motility is poor, antibodies are not detected and either white cells are found in excess in the ejaculate or organisms are cultured.

Retrograde ejaculation is poorly understood. In some cases this responds to training the bladder neck to close. This is achieved by the husband's having intercourse with a full bladder — the presence of urine in the bladder encourages the bladder neck to close and antegrade ejaculation

The largest group of patients are those with low sperm density or poor sperm motility or both. The term oligozoospermia is often used as a diagnosis when in fact it is a description of findings from semen analysis when the cause of this finding is unknown. In the absence of a precise diagnosis any therapy can be at best only a guess. There are many enthusiastic reports in the literature for various treatments, but critical evaluation of these reports reveals no treatment that has been clearly shown to result in an increase over the natural conception rate³⁻⁵. In some cases

there may be considerable psychological benefit from a short period of treatment which will allow the couple time to adjust to the news that fertility prospects are not good.

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DISCUSSION

Whitaker: Can I just mention one other treatment which actually hasn't been mentioned at all? What we call *in vitro* fertilization. This is being done by Doctor Hall, and he is now using oligospermic sperm to fertilize eggs directly. He's having a good degree of success, but I'm afraid I can't give you any figures. I might also add that we've also explored 5 men with absent vasa; we've taken fluid, found the odd sperm and used it for an IBF but so far we haven't had a pregnancy. And I doubt, honestly, whether we will.

Hargreave: I think, Bob, that for a man with a low sperm count, the IBF is the hottest topic in infertility at the moment. But to my mind that has to stand the same test as anything else, will you in fact get a better pregnancy rate using this technique than you would if you did nothing at all.

Whitaker: In fairness, though, we've got to remember that when they get to this stage they've tried pretty well everything else.

Hargreave: Well, I think they have but I'm not absolutely certain about that; they seem to whistle some through pretty quickly actually.

Blandy: Can I join in on this, because, years ago, when we were working on HLA antigens, we had to do something to keep the people coming to the clinic. So we thought of a number and doubled it and gave them that. And with whatever pill we gave the oligozoospermics we got a 30% improvement in the ordinary parameters, 30% remained the same and 30% got worse. And this is why you need controls

because if you're dealing with any variable which varies randomly and you follow it up for a year, you'll get 30% getting better, 30% the same, and 30% getting worse, won't you?

Hargreave: I think there is a potential there for some quite misleading information and I think, there's great potential for *in vitro* fertilization. We store sperm for chaps with cancer and we've certainly had a pregnancy from liquid-nitrogen-stored sperm, when I suspect AIH would have been absolutely hopeless. I also think people with Kartagener's syndrome, this very curious syndrome of immotility associated with dextrocardia, can be helped in this way; we have achieved Hamster A fertilization with sperm from a man with Kartagener's syndrome who has totally immotile sperm, by actually putting the sperm in juxtaposition to the egg membrane; and to my mind that opens the possibility to treat Kartagener's syndrome by putting the sperm in juxtaposition to the wife's egg from which the zona has been punctured in some way.