

Understanding male subfertility and its management

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If a couple faces difficulties in having children, usually the female partners see a doctor. But the scenario does not favor the males always when it is due to the causes of infertility or sub-fertility of male partners.

Statistics show that males are responsible in 50 percent of the sub-fertility cases. Male factor is alone responsible for about 30 percent of sub-fertility cases. In 20 percent cases both partners have some problems in reproductive abilities. In infertility cases, not only the female partners, but also the male counterparts must go through the medical examination.

Normal fertility is usually defined as achieving a pregnancy within 2 years by regular coital exposure. But this is not the universal rule as in many cases, some factors or conditions like age of the female partners, family history, medical history or even the occupational history of either partner necessitate early evaluation and treatment of the couple.

While seeking for treatment options, we must remember that both partners should be evaluated at the outset and treated simultaneously. Because it takes months to evaluate a female and spermatogenesis (sperm production in male) takes about 90 days to complete a maturation cycle. So it saves time and duration of treatment if both partners are treated simultaneously.

In order to understand the male subfertility the underlying causes should be reviewed.

One may have problem in the pathway carrying the semen or sperm. After being produced by spermatogenesis in the testes, sperm propels through tube like structure called epididymis and vas deferens to mix with fluids from seminal vesicle, prostate and other glands forming semen that ejaculates through ejaculatory duct outside the penis.

A male may have blocks at any point of this pathway or vas deferens may be absent congenitally. As a result, sperm remain absent in the semen or very scanty in number if the blocks are partial. Moreover, as spermatogenesis goes on, one does not have to worry much about one's fertility ability.

Sometimes semen analysis reveals no sperm or a very little amount of sperm due to failure of spermatogenesis or inadequate production of sperm in the testes. In these circumstances, there are chances to retrieve sperm by fine needle aspiration in 15 to 35 percent cases. Here specialists use micromanipulator for intracytoplasmic sperm injection (ICSI) into the ova for fertilisation that leads to development of embryos and ultimately to pregnancy.

Sometimes antibodies are produced against own sperm in many males rendering the sperm unable to fertilise an ova. He should consult with a specialist. There are quite a few options to address this problem.



Seminal vesicle and prostate contribute about 90 percent of the total volume of semen and nearly all constituents except sperm of the semen. It is very important that they function well and there is no acute or chronic infections as well as atrophy or dysgenesis of seminal vesicle.

At birth, testes of a baby may not descend in the scrotum. This is cryptorchidism. If the testes do not descend in place by first one year, they lose the ability of sperm production in adulthood.

There are other causes as well like genetic problem, torsion (twisting of

spermatic cord that provides the blood supply to a testicle), orchitis (inflammation of testes) following mumps or due to some other infections. We should vaccinate our children against mumps.

Some drugs are also implicated with the fertility problems of males such as Sulphasalazine, Ketoconazole, Chlorpromazine, Amitriptyline, Imipramine, Thiazides, Spironolactone, Calcium channel blockers etc.

So mention about any long term medication to your doctor when you are seeking treatment for infertility.

When a person gets radio- or chemotherapy, he may have to compromise with his reproductive ability.

A few males also suffer from the imbalance of hormones controlling spermatogenesis especially Gonadotropin Releasing Hormone, Follicle Stimulating Hormone (FSH), Luteinizing Hormone (LH), Testosterone, Prolactin and Thyroid hormones. These conditions are treatable in most of the cases and the male regains fertility ability.

Steroids also have a bad impact on fertility. Although it enhances our physical performance, it also sup-

presses hypothalamic-pituitary axis that secretes and regulates hormonal control for spermatogenesis. These anabolic drugs also cause testicular atrophy. So it becomes counter-productive when one takes testosterone capsule or injection for having reduced number of sperm in his semen. Alcohol, marijuana, cocaine etc. also compromise one's reproductive ability by suppression of spermatogenesis.

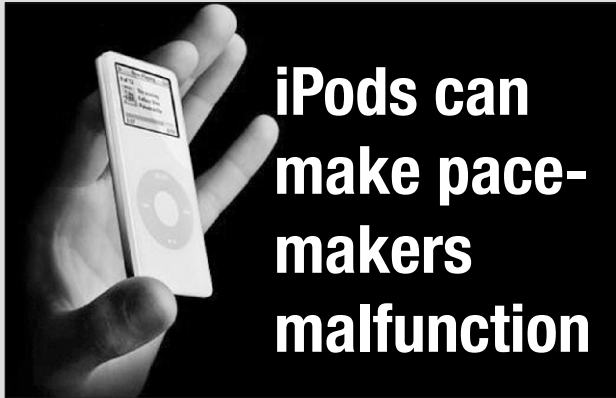
A meta-analysis shows that there is reduction in sperm concentration ranging from 13 to 24 percent who smoked compared with non-smoker males. Nicotine reduces antioxidants in the seminal fluids; as result sperm membranes get affected. So one should quit smoking to improve one's reproductive ability.

When couples try to conceive, 16 percent will still be unsuccessful at the end of 1 year, 8 percent after 2 years and 7 percent at the end of 3 years. So the wise thing is to keep patience and consult with a specialist.

We should not take in account the myths regarding male subfertility. Men with compromised reproductive abilities are now able to be a proud father — the most cherished divine blessings on earth.

The writer is a Consultant, Infertility & Assisted Reproduction of Labaid Fertility Centre, Labaid Specialised Hospital.

Research Update



iPods can make pace-makers malfunction

REUTERS, Chicago

iPods can cause cardiac implantable pacemakers to malfunction by interfering with the electromagnetic equipment monitoring the heart, according to a study presented by a 17-year-old high school student to a meeting of heart specialists.

The study tested the effect of the portable music devices on 100 patients, whose mean age was 77, outfitted with pacemakers. Electrical interference was detected half of the time when the iPod was held just 2 inches from the patient's chest for 5 to 10 seconds.

The study did not examine any portable music devices other than iPods, which are made by Apple Inc.

In some cases, the iPods caused interference when held

18 inches from the chest. Interfering with the telemetry equipment caused the device to misread the heart's pacing and in one case caused the pacemaker to stop functioning altogether.

The study was held at the Thoracic and Cardiovascular Institute at Michigan State University. The results were presented at the Heart Rhythm Society annual meeting in Denver.

Jay Thaker, lead author of the study and a student at Okemos High School in Okemos, Michigan, concluded that iPod interference can lead physicians to misdiagnose actual heart function.

Thaker said he is interested in doing a similar study about how implantable cardioverter defibrillators, known as ICDs, are affected by iPods.

Gentle yoga may aid migraine sufferers

A combination of yoga poses, breathing exercises and relaxation may help reduce the frequency and intensity of migraines, a new study suggests.

Researchers in India found that among 72 adults suffering from migraines, patients who were randomly assigned to take part in a yoga therapy program started having headaches less often and endured less pain with each migraine attack compared with the subjects assigned to a self-care group.

What's more, the pain relief brought considerable improvement in symptoms of anxiety and depression, according to the researchers, led by Dr P J John of the University of Rajasthan, Jaipur.

The complete study findings are reported in the current issue of the journal Headache.

Gentle yoga postures and breathing techniques are believed to have a calming effect on the nervous system, and studies have suggested that yoga can help alleviate various forms of pain, from chronic back pain to the joint pain of arthritis.

To see whether the practice might aid with migraine, John's team randomly assigned 72 migraine sufferers to one of two groups. One group received education on managing their pain by avoiding migraine triggers and making diet and lifestyle changes.



The other group received yoga therapy, which included gentle yoga postures, breathing practices, relaxation and meditation. Participants practiced five days a week for one hour each day, except on days when they were having a migraine attack or just recovering from one.

After three months, the yoga group showed an overall improvement in the frequency and intensity of their migraine attacks, whereas the comparison group showed either no change or worsened symptoms.

"This study provides preliminary evidence that integrated yoga therapy can be an effective treatment for migraine," John's team writes.

Larger, longer-term studies are now needed to confirm the results, the researchers conclude.

Source: Headache, May 2007

Did You Know



WHO PHOTO

Lifestyle changes help protect heart postmenopause

Women can fight menopause's heart-threatening consequences by losing weight, exercising more and eating better, and these lifestyle changes may be particularly helpful to those who stop taking hormone replacement therapy (HRT) a new study shows.

"These results have important public health implications and suggest that a non-pharmacologic lifestyle approach is both safe and effective for cardiovascular risk factor reduction in postmenopausal women, especially those who discontinued HRT use," Dr Kelley K Pettee of Arizona State University in Mesa and her colleagues conclude.

The risk of heart disease rises after menopause as the incidence of cardiovascular risk factors such as high blood pressure and high cholesterol also increases, Pettee and her team note in the American Journal of Preventive Medicine.

HRT, which boosts levels of HDL, the "good" cholesterol and lowers levels of LDL, the "bad" cholesterol, had been widely prescribed to protect the heart while easing menopausal symptoms. But a large clinical trial found HRT might actually increase heart disease risk, so many women have been advised to stop taking the hormones.

When the results of this study, the Women's Health Initiative, were published, Pettee and her team were in the midst of a 5-year study investigating whether lifestyle changes could reduce heart disease risk

among postmenopausal women.

The researchers hypothesized that while stopping HRT would increase certain heart disease risk factors, lifestyle changes would help counteract this effect. To investigate, they compared 240 women who were on HRT when the study began; 130 of these women stopped taking hormones after 18 months.

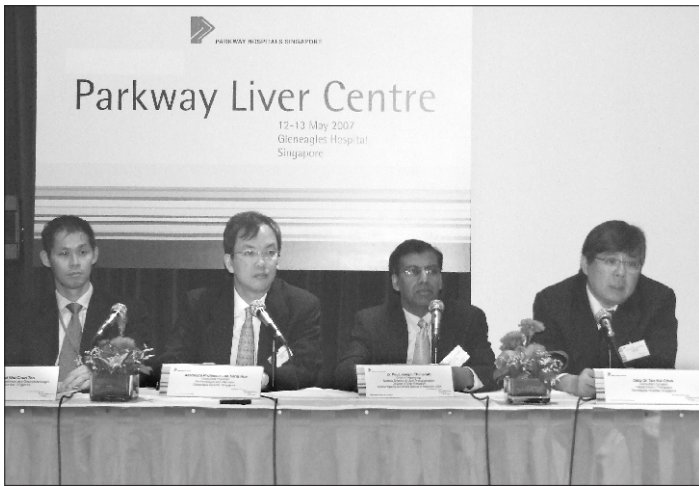
The women were randomised to a lifestyle intervention group, which included 150 minutes of moderately intense physical exercise a week; a 1300 to 1500-calorie-a-day diet; and reduction of total and saturated fat; or a control group of women who attended a series of lectures on health.

The women in the lifestyle intervention group showed significant reductions in weight, body mass index, waist circumference, total cholesterol levels, and LDL levels. Total cholesterol and LDL cholesterol rose among women who quit taking HRT.

While the women in the control group who stopped taking HRT showed a 22-mg/dL rise in total and LDL cholesterol, those in the lifestyle intervention group had their total and LDL cholesterol rise by less than 4 mg/dL.

"Based on the findings of the current investigation, special attention should be paid to encouraging lifestyle strategies that are likely to impart more benefit and less risk than drug therapies," the researchers conclude.

Source: American Journal of Preventive Medicine



Inaugural session of Liver Symposium 2007 at Gleneagles Hospital, Singapore (Left). Liver donor Mohamed Eusoph Bin Kadir Marideen with her mother, the liver recipient Hatheejal Beevi Binte Sahib (Right) after successful live donor liver transplant at Gleneagles Hospital.

LIVER SYMPOSIUM 2007

Today there is hope for end stage liver diseases

STAR HEALTH REPORT

Liver damage is quite a common health problem throughout the world. The consequence of liver cirrhosis, hepatocellular carcinoma (liver cancer), viral attack often lead to fatality where patients have no option but to wait till die. Liver transplant surgery provides those patients with a new option to live longer.

These talks came in the inaugura-

tion session of Liver Symposium 2007 organised by Asian Centre for Liver Diseases & Transplantation at Gleneagles Hospital — one of Parkway Group Healthcare hospitals in Singapore.

The state of the art centre provides the cutting edge technology for liver transplantation and further care for patients coming from the Asia Pacific region and beyond.

Renowned physicians dealing with

the specialty in different parts of the world including the USA came to share views and latest development in this field in the two day long symposium at Gleneagles Hospital recently.

They presented scientific papers on different issues like paediatric liver transplant, malignancies, management of acute liver failure, long term post transplant management issue, barriers to liver transplant, issues with live donors and recipients, hepatitis,

radiology in liver transplant, extrahepatic manifestation of HCV, liver dialysis and so on.

Dr Tan Kai Chan, Consultant Surgeon, Hepatobiliary / Transplant of Asian Centre for Liver Diseases & Transplantation at Gleneagles Hospital expressed to engage paediatric hepatologists and start paediatric liver transplant programme in the near future.



Totally deaf people need not stay deaf any longer

STAR HEALTH DESK

For centuries, people believed that only a miracle could restore hearing to the deaf. With the introduction of cochlear implant that belief would have been changed.

Recently a three and half year old boy has been operated upon by a team of doctors at Apollo Hospital, Dhaka led by Consultant ENT Surgeon Dr Sanjeev Gupta. A prosthetic device, called cochlear implant, was implanted. This operation has brought back hearing to this child.

A cochlear implant is a medical option for individuals with severe to profound hearing loss in both ears, specially for the patients who get little or no benefit with hearing aids.

Cochlear implant systems convert everyday sounds into coded electrical impulses. These



Shahrukh, wearing a cochlear implant on his left ear.

electrical pulses stimulate the hearing nerve, and the brain interprets them as sound. As the brain receives sound information very quickly, sounds are heard as they occur.

Cochlear implants can offer a wide range of benefits, including hearing speech, environmental sounds and music. Unlike a hearing aid, it does not make sound louder or clearer. Instead, the device bypasses damaged parts of the auditory system and directly stimulates the nerve of hearing, allowing individuals who are deaf to receive sound.

Some individuals with implants can now communicate without lip-reading or signing, and some can communicate over the telephone.

In short Cochlear implant is the only hope for the totally deaf. Cochlear implants permit implant recipients to reintegrate with the hearing world.



Your Doctor

Send health related queries (either in English or Bangla) to Your Doctor, Star Health, The Daily Star, 19, Karwan Bazar, Dhaka 1215 or e-mail your problem to starhealth@thedailystar.net