

## Session 5

# MALE CONTRACEPTION

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39

### RECENT ADVANCES IN MALE FERTILITY REGULATION: WHO INVOLVEMENT

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The objective of the WHO Task Force on Methods for the Regulation of Male Fertility is to develop new and improved methods for fertility regulation to be used by men.

The current activities of the Task Force will be presented and their significance will be emphasized for both research and development and collaborative strengthening of research in developing countries.

#### **Hormonal methods**

**Long-acting androgen esters:** This includes the priority development of one ester (code name 20 Aet-1), into clinical studies and the testing of other esters and formulations for androgen supplementation.

**Progestogen-androgen combinations:** Combination regimens of different progestogens and androgens to achieve better efficacy and acceptability are being studied.

**LHRH analog-androgen combinations:** The reversibility of long-term suppression of testicular function by LHRH agonist in monkeys and the improvement in the efficacy of slow release micro-encapsulation of LHRH agonists in men will be assisted.

**Evaluation of functional capacity of residual sperm in azoospermia or severe oligospermia:** This includes a multi-center field trial to determine if azoospermia is an absolute requirement in a male antifertility strategy; and two studies involving suppression of normal men to low oligospermia by the use of testosterone enanthate alone or in combination with DMPA to determine if the residual sperm show functional capacity in in vitro tests.

**Inhibin:** The provision of an international research standard is being investigated.

#### **Drugs and plant products**

**Synthesis program:** This includes synthesis and screening of drugs with an action on sperm in the epididymis (joint program with IOCD); establishment of a program of targeted research in this area; conduct of a

symposium on this subject (jointly with Family Health International).

**Tripterygium wilfordii:** This includes chemical isolation of active components; retrospective clinical follow-up of patients immediately after cessation of treatment. This is a collaborative program with the Jiangsu Family Planning Institute, Nanjing.

**Gossypol:** This includes development of immunoassays and of labelled gossypol to aid studies on the mechanisms of action of (-)gossypol; screening the analogs synthesized by Task Force scientists for spermicidal and anti-viral action (in collaboration with NIH); studies to understand gossypol-induced hypokalemia, including the search for an animal model and the follow-up of patients with renal damage after cessation to gossypol administration.

**Vasectomy:** Studies are being carried out on effects of prostatic size and function; and on the immune response to vasectomy and its influence on the success of reversibility.

**Percutaneous vas occlusion:** Collaborative investigations are being carried out with Chinese investigators on the efficacy and immune response and its association with reversibility in the percutaneous vas occlusion method in which various polymerizing agents have been used to occlude the vas: and exploration of possible prospective studies with imported, toxicologically-approved, materials.

**Strengthening of research capabilities:** In addition to research and development, the Task Force is active in raising the level of awareness in the general field of andrology through the conduct of andrology workshops, research training, and joint scientific meetings.

## 40

### TOWARD A BETTER VASECTOMY: AN ASSESSMENT OF OPEN-ENDED VASECTOMY

**Errey B**

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Leaving open the testicular end of the vas at vasectomy could reduce symptoms of epididymal congestion and improve the success rate of vasovasostomy but might have the disadvantage of increasing the incidence of painful sperm granulomas and spontaneous recanalization. In 6,000 open-ended vasectomies, the rate of epididymal congestion was significantly less than in 3,867 standard vasectomies. Painful sperm granulomas were significantly reduced. Spontaneous recanalization was rare in both groups. Whether or not open-ended vasectomy improves the success rate of vasovasostomy, it represents an improvement in technique because it reduces the rate of complications after vasectomy. Closure of the sheath over the prostatic end of the vas is essential if recanalization is to be prevented.

## SPONTANEOUS RECANALIZATION IN MALE SURGICAL CONTRACEPTION

41

**De Castro M P**

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The spontaneous recanalization of the vas deferens is a phenomenon which we believe to be foreseeable for a certain number of cases of male voluntary sterilization. When recanalization is detected during the follow-up period, the solution is a reoperation, usually with no further consequence. Undetected recanalizations may result in undesired pregnancies and the sterilization process must be considered a failure.

To verify the incidence of spontaneous recanalization and the failure rate of vasectomy we evaluated statistics from February 1981 to May 1987. During this period the PROPATER clinic in Sao Paulo received 20,021 male candidates for voluntary sterilization. These patients went through screening and counselling procedures and 21.2% of all candidates were not accepted for vasectomy and were oriented to a temporary method. We therefore operated on 15,773 men in 76 months of clinic activities.

Patient follow-up was considered an essential part of long-range success and through considerable efforts we have been able to achieve 85.6% of follow-up, i.e. of PROPATER's 15,773 men undergoing vasectomy 13,500 attended all the requirements of the follow-up period. Of these, there were 7,361 in whom the technique used for closing the vas deferens was ligation and 6,139 in whom the vas was closed using electrocoagulation.

In total, 218 spontaneous recanalizations were detected: 204 of these during the follow-up period and 14 late detections, i.e. recanalizations occurring after the achievement of azoospermia.

Further breakdown of our data showed that in the group using ligation, the incidence of recanalization was 2.3%, while in the group using electrocoagulation the recanalization rate was 0.8%.

In our series of 15,773 consecutive vasectomy procedures, the contraceptive failure rate was 0.16% (26 confirmed pregnancies).

## VASECTOMY IN LATIN AMERICA: THE COLOMBIAN EXPERIENCE

42

**de los Rios J**

PROFAMILIA, Antioquia, Colombia

PROFAMILIA in Colombia first introduced male sterilization as a contraceptive option in 1970. But the method was overtaken by female sterilization, which began being offered two years later, and became less significant over the years. Thus the number of vasectomies decreased from 25% of all sterilizations in PROFAMILIA's clinic during the 1970-75 period, to only 1% in 1984.

Then, in late 1985, PROFAMILIA opened two "clinics for men", attached to the existing clinics in Bogota and Medellin but with separate administrations and personnel, and with separate entrances. At the same time vasectomy began to be promoted, and the results in terms of public interest, visits to the clinics and requests for vasectomy have been very encouraging. This paper analyzes the characteristics of the two "clinics for men" and their achievements, and the reasons behind the latter.