Sixty-one patients suffering from impotentia coeundi were treated with local dosages of papaverine hydrochloride, injected into the corpus cavernosum. In patients with neurogenic, psychogenic or a mild form of vascular disorders the injection induced erections which lasted on from 20 minutes to between 4 and 5 hours. Sixteen volunteers who were taught to self-administer the solution, injected the preadjusted dosage into the corpus cavernosum each time before the intended sexual act.

Introduction

Hectic life style, nicotine addiction, indulgence in stimulants, lack of exercise, overnutrition: all these outgrowths of our modern civilization may lead in the most productive period of life to a variety of morbid conditions, primarily to cardiac, vascular and metabolic diseases.

Less severe by comparison but all the more significant is the state we encounter so often and denote as impotentia coeundi which may be damaging in its consequences as it undermines the subject’s spirit, labour fervour and may be the cause for family life to disintegrate. International statistics have disclosed in 35–55% of males between 20 and 60 years of age various degrees of potency disorders [7, 11, 18]. There are three groups of such disorders according to their origin [2]:

- neurogenic—psychogenic
- endocrine
- vascular
  (a) pathologic inflow (arterial occlusion)
  (b) pathologic outflow (“venous leak”, efferent venous hyperfunction or spongio-cavernous fistula)

Any of these factors, alone or in combination, may lead to impotence, a condition distressing for the subject and exacting for the doctor, not easy to manage and requiring a lot of endurance from both. Attempts at psychotherapy, hormone therapy and angiologic surgery alternate with penile prosthesis implantation, most widely practised in Western countries.

In 1982, French researcher Virag [17] was the first to administer intracavernous injections of papaverine hydrochloride in the course of revascularization.
Fig. 1. Mechanism of erectile and ejaculative reflex. 1 = Preganglionic sympathetic nerves; 2 = postganglionic sympathetic nerves; 3 = preganglionic parasympathetic nerves; 4 = postganglionic parasympathetic nerves; 5 = afferent nerves; 6 = lumbar nerve; 7 = abdominal aortic plexus; 8 = superior hypogastric plexus; 9 = gangliospinal (IIId sacral segment); 10 = IIId sacral nerve; 11 = erector nerves; 12 = lumbosacral plexus; 13 = inferior hypogastric plexus; 14 = pudendal nerve; 15 = dorsal penile nerve; 16 = inferior hypogastric plexus; 17 = testicular plexus; 18 = sympathetic trunk (lumbar portion); 19 = 1st lumbar ganglion of the sympathetic trunk; 20 = white communicating ramus; 21 = intermediolateral nucleus (1st lumbar segment) (after Weissbach, Lange, Rodermund, Zwicker, Gropp, Pothmann)

surgery, and found vigorous erection to develop. Thence it was applied as a curative for potency disorders, notwithstanding the fact that the physiological process of erection is induced by parasympathetic stimulation of the S-I to S-III anterior radical erectile centres [11, 12, 14] (Fig. 1). Satisfactory results are attainable with papaverine when pathologic reflex, psychic alteration or mild vascular lesion is responsible for the potency dysfunction.

Papaverine hydrochloride, a spasmyloytic containing opium alkaloid, reduces the smooth-muscle tension, acts as vasodilator and counteracts the vasoconstrictor effect of adrenaline.

Local doses of papaverine cause cavernous smooth muscles to relax and arteries to dilate [15, 21] (Figs 2, 3).