Autonomic arousal (in the form of palpitations, flushing, sweating etc.) is a characteristic accompaniment of the sexual orgasm (Masters and Johnson 1966). Curiously enough, autonomic arousal has also been implicated as a cause of the sexual orgasm, and, more specifically, the ejaculatory component thereof (Redmond et al. 1983). Such autonomic arousal may result from opiate withdrawal (Blachly 1966), the administration of alpha-2 agonists such as yohimbine (Holmberg and Gershon 1961), and anxiety.

Incidental descriptions of anxiety-provoked sexual arousal have sparsely dotted the psychiatric literature. Amongst the early writers, Ellis (1936) described orgasm spontaneously resulting from anxiety-provoking fantasies, and Freud (1938) wrote that intense fear or excitement can precipitate a breakthrough of sexual manifestation.

More recently, specific reports have appeared documenting spontaneous ejaculation in numerous contexts, as already described. The underlying mechanism has been hypothesized to involve central noradrenergic activity with emphasis on the role of alpha-2 noradrenergic receptors (Redmond et al. 1983). Despite such reports, no systematic description of the clinical contexts and characteristics of anxiety-provoked sexual arousal has as yet appeared in literature. We cite a case where an unusual association between anxiety and sexual arousal was observed.

**Case Report**

A., a 16 year old boy, contacted the first author (C.A.) at a personal level for evaluation of an unusual problem. He reported that, from as far back as he could remember, any situation which acutely provoked anticipatory anxiety in him also provoked an intense sexual arousal which he likened to a sensation of “impending orgasm.” Examples of such anxiety-provoking situations were — being late to catch a train, waiting for the examination papers to be distributed in the examination hall and awaiting crucial news.

The sensation of “impending orgasm” was entirely penile, though unaccompanied by penile erection; while not unpleasant in itself, it clashed powerfully with his prevailing anxious mood state to produce an overall disagreeable effect. At times, the arousal was so intense that, if the situation permitted privacy, he would masturbate to orgasm to obtain relief. Alternatively, relief would be immediately

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obtained with the resolution of the stressful situation. Accompanying symptoms of autonomic arousal were flushing and awareness of heartbeat; these were always mild and never dominated the clinical picture.

Further probing revealed that once, at the age of 12, he had panicked during a school examination on discovering that he was desperately short of time in which to complete his paper. Within seconds, he experienced a sexual orgasm comprising ejaculatory spasms and intense pleasure. The orgasm occurred on a flaccid penis, and was accompanied by palpitations and flushing. There was no seminal discharge. A., being prepubertal and sexually naive at the time, did not understand his experience until the onset of masturbatory activity, post-puberty, at the age of 14. This was the only occasion, however, when an anxiety-provoking situation brought about an orgasm. A. was above average in intelligence. There was no history of drug abuse, sexual dysfunction or manifest psychiatric symptomatology. Physical examination was normal. No medical or psychiatric diagnosis was warranted.

Discussion

A gamut of anxiety-related emotions have been reported to evoke sexual arousal. These include anticipatory anxiety (our case), anxiety per se (Feldman 1951), fear (Freud 1938) and panic (Cameron and Grunhaus 1985). Diagnosis-wise, normals (our case), neurotics (Cameron and Grunhaus 1985) and psychotics (Redmond et al. 1983) can manifest the phenomenon. Both males (Redmond et al. 1983) and females (Cameron and Grunhaus 1985) and, amongst males, both adults (Redmond et al. 1983) and children (our case; Sterba 1942) may be affected. As in our case, anxiety-provoked sexual arousal may affect sexually naive boys even prepubertally. A. recalled such experiences from "as far back as he could remember."

The sexual arousal may be in the form of sexual excitement (Cameron and Grunhaus 1985), "impending orgasm" (our case), or full orgasm (our case; Redmond et al. 1983). The orgasm may be "dry" (our case) or with seminal discharge (Redmond et al. 1983). Penile erection need not accompany the ejaculatory spasms when orgasm occurs (our case); in fact, it may be totally suppressed if the sympathetic components of the state of autonomic arousal dominates the parasympathetic component.

It is likely that certain individuals are predisposed to the anxiety-provoked sexual arousal as most reports (Redmond et al. 1983; Cameron and Grunhaus, 1985) including ours, describe the phenomenon as repeatedly occurring.

Finally, such a phenomenon is possible more common than is realized. When occurring in otherwise normal people, it is unlikely to come to the notice of physicians. When occurring in an out-patient population, it is a phenomenon that is unlikely to be asked for or volunteered. Systematic work is required to determine the incidence and clinical features of anxiety-provoked sexual arousal, and the characteristics of the population in which it appears.

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