

History of Koro in Singapore

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'Koro' refers to a culture-related syndrome which has as its central theme a fear of death due to the patient's conviction that his penis is shrinking or retracting into the abdomen. The syndrome in traditional Chinese medicine is known as 'suo-yang' which literally means shrinkage of the male sexual organ. Ancient writings on *suo-yang* are found in the Yellow Emperor's Classic of Internal Medicine, a collection of dialogues between the Yellow Emperor and his court physician⁽¹⁾. It tends to be short-lived and may affect single individuals or groups.

The 1967 Koro epidemic in Singapore

In October 1967, there was an outbreak of koro in Singapore that lasted approximately 10 days⁽²⁻⁴⁾. Of the 469 cases, 95% were males and 5% females. Of the 454 men, 95% were Chinese; the rest were Malays and Indians. Of the females, all cases were Chinese. Among the men, ages of patients ranged from 4 months to 70 years, with the greatest number of patients being between 16 and 30 years of age. It became a common sight to see men appearing at admission rooms with chopsticks and other mechanical aids tied to their sex organs to prevent retraction.

For some years, the Singapore population had been concerned about the use of implants of oestrogenic hormones into chickens to increase their growth rates⁽⁵⁾. Some cases of gynecomastia in men developed, and there was awareness in the community that some foods may contain injected chemicals that produce sexual changes.

The newspapers in October 1967 reported that some people developed koro after eating the meat of pigs inoculated with anti-swine fever vaccine. A few days later, it was reported that an inoculated pig had died from penile retraction. Rumours that eating the flesh of inoculated pigs would cause koro created public panic. The number of koro cases rose, with 97 male cases being seen in a single day, 5 days after the initial newspaper report. After the Singapore Medical Association and the Ministry of Health made public announcements over television and in the newspapers stating that koro was a result of fear, not a physical disease with fatalities, and that meat from inoculated pigs was completely harmless to human beings, there was an immediate decline in the incidence of koro. Several days after these public announcements, there

were only a few cases reported, and within a month, koro was not being reported in Singapore at all⁽²⁻⁴⁾.

The cardinal manifestations of koro are a belief in the retraction of the penis and impending death from shrinkage of the genitalia into the abdomen; and a panic syndrome with fear, a feeling of collapse, palpitation, sweating, breathlessness and bodily spasms. The principal remedies were manual restraint by the afflicted individuals (72%) and placebo medications and reassurance (74%)⁽⁴⁾. Only 17% of the cases had further attacks, and in only 7% was there a feeling that sexual power had been affected. An unusual feature of this epidemic was that most patients denied having had sexual activity before the onset of the symptoms.

Though the ancient medical texts consider *suo-yang* as a harbinger of fatal illness⁽¹⁾, in fact death hardly occurs, and in the Singapore epidemic of 1967, there were no mortality. Several casualties reported were due to mistreatment and mishandling by relatives or healers.

Sporadic cases of koro

Gwee (1963) described a few sporadic cases of koro⁽⁶⁾. Below is an illustration: "A 38-year-old Chinese man, married for 16 years, had his first attack of koro at age 18 following a strong dose of purgative, which caused some retraction of his penis. He had regular intercourse with his wife, but he felt weakened physically by it. His most recent attack had occurred during intercourse, and he recovered spontaneously after holding onto his penis for 20 minutes. He did not dare to have intercourse after that." These reports are of patients who had premorbid psychological conflicts, often of a sexual nature, which predispose them to the development of koro. Interestingly, one 8-year-old whose penis was bitten by an insect developed several koro attacks after adults made efforts to anchor his penis outside the abdomen. In this case, the adults' fears were displaced or projected onto the child.

DISCUSSION

This belief of penile retraction has been considered delusional in nature⁽²⁻⁴⁾. But this belief is culturally understandable, as indicated in the ancient history of *suo-yang*⁽¹⁾. It is a shared belief - wives would perform

fellatio for their men who suffered from this condition and bewildered relatives would clutch the victim's penis, tie it with string or clamp it with chopsticks to halt the retraction, and traditional healers have gadgets to grip the penis. In the koro epidemic of 1967 in Singapore, many cases responded to reassurance and education, thus showing that the belief is not unshakeable, like in a delusion.

Castration was introduced in the 10th century A.D. in China as a form of punishment meted out by the Emperor. It involved amputation of the penis, scrotum and testes. Man-servants or eunuchs in the courts of the Emperor's wives were castrated too. In many ways, *suo-yang* can be likened to a form of 'psychological castration', a symbolic loss of potency and power. The fear of castration may be attributable to underlying guilt and shame (eg. over sexual indulgence) and hence fear of punishment. That *suo-yang* sometimes occurs during or after sexual intercourse may be because the vagina is viewed by the patient as a castrating device.

The factors which contribute to the occurrence of koro include beliefs and attitudes pertaining to sexuality. A common belief is that the loss of semen weakens the body, and loss of *yang* occurs with masturbation and nocturnal emission in men. The preciousness of semen is expounded in the Chinese saying: "One hundred grains of rice make one drop of blood, and one hundred drops of blood make one drop of semen". The loss of semen through sexual excesses is thought in traditional Chinese belief to lead to fatal ill-health.

Social tension was present during the Singapore epidemic in 1967 over rumours of contamination of pork. Because of the tension, fear spread rapidly and expanded into epidemic proportion - but in all epidemics, the duration was short, often less than a

month. The very rapid rise and fall of the number of cases, and the frequency of cases rapidly subsiding after appropriate public reassurance from governmental agencies, suggest a mass hysteria.

Koro is not seen as hysterical in nature as the motivation or secondary gain is not apparent and the emotional state of the patient is one of extreme fear. It is unlikely that such a feared situation would be exploited for social ends. With the symptom-complex of fear of penile retraction with impending death, feeling of collapse, palpitation, perspiration, nausea, breathlessness, blurred vision, bodily spasms, pain and paraesthesia, koro is often viewed as a form of panic disorder. For sporadic cases of koro, deep-rooted conflicts in the sphere of masculinity and sexuality, misconceptions about nocturnal emissions, masturbation and intercourse, lack of confidence and experience in heterosexual relations and other psychosexual problems, need to be identified and treated. As an epidemic phenomenon, socio-cultural and community factors would need to be addressed to halt the process of contagion. These patients are mostly poorly educated⁽²⁻⁴⁾, and health and sex education are crucial in dispelling the myths and misconceptions of human sexuality.

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