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## “STRYCHNINE POISONING – A CASE REPORT”

### Introduction

The use of strychnine as a mean of committing suicide is currently extremely unusual, as its commercialization, formerly as a pesticide, has been strictly forbidden. As a matter of fact, no other cases were found in the database of the Centre Branch of the Portuguese National Institute of Legal Medicine in the last 5 years.

### Case Report

The authors report a case of a 72 year old Caucasian male with background of prostatic illness and other unspecified diseases, suffering from extremely intensive pain, that had frequently expressed his wish to commit suicide.

One morning, while his wife left the house for a moment to buy some food, he decided to carry out his idea by way of ingesting strychnine. When the wife came back home, she found him very nervous, sitting on the bed. He told her what happened and pointed out the place where the package containing strychnine was kept.

When the medical emergency team arrived to the scene, the victim was already in a severe agonic condition. No convulsions were registered in the police report, which solely mentioned that the victim became weaker and weaker.

At the autopsy room, external examination of the body showed merely facial cyanosis, puncture marks in right arm, related to medical procedures, and an urine catheter.

Concerning internal examination of the body, the most remarkable findings were enlarged lymph nodules surrounding the carotids vessels (the most enlarged measuring up to four centimetres along its longer axis). Abdominal aorta, inferior vena cava and its pelvic ramifications, urine bladder and prostate were invaded by white hard tissue masses. In the liver there were several hard round nodules, the largest with a diameter of fifteen millimetres. An *ante mortem* fracture of the sternum's body was found, related to medical procedures. Lungs were oedematous, a significant left ventricular hypertrophy was detected and the stomach contained about ten cubic centimetres of a pink odourless fluid. There was also a generalized organic congestion.

Histopathological investigation confirmed prostatic adenocarcinoma of a low degree differentiation (score 10 in Gleason's ranking), with local and distant metastatic proliferation.

Toxicological ancillary report confirmed the presence of strychnine in blood, urine, gastric contents samples, as well as in the contents of the package retrieved from the house.

## Discussion and Conclusions

Strychnine affects primarily the nervous systems by acting as an antagonist of the inhibitory neurotransmitter glycine at receptors in the spinal cord, brain stem and higher centres. Therefore, by lowering the neuronal excitatory threshold it leads to increased muscular activity and convulsions. Death can occur in as short as two minutes but usually takes one or two hours and is due to severe breathing impairment that occurs during each consecutive convulsive wave.

Because of its bitter taste and less availability, strychnine is currently seldom used as a mean of suicide. Since there was no mention about convulsions in the information given before autopsy and, aside from the evidence of neoplasia, the most relevant findings in the internal examination, were pulmonary oedema, generalized organic congestion and significant left ventricular hypertrophy (which carries an increased risk for arrhythmic events), which in an aged individual could point towards a natural cause of death, it is understandable the challenge that could be set if the victim had decided to hide the poison and had been found already dead by his wife.

## References

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