

Position of Knot in neck & relation with working hand in Cases Of Hanging

BRIEF COMMUNICATION

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ABSTRACT

Present Study conducted prospectively to find out relation of working hand and position of knot in the neck in cases of hanging. A total of 390 postmortems were conducted in whole year out of which 35 cases (8.97%) were of hanging. Among these 35 cases 33 individuals were working with right hand. Remaining 2 individuals working with right hand the position of knot on neck were on right side in 15 cases (45.45%), on left side in 11 cases (33.33%), on center of occiput in 5 cases (15.15%) & on front of neck in 2 cases (6%). the result indicate that working hand has no relation with position of knot on neck in cases of hanging. To our knowledge this is first study on this problem.

INTRODUCTION

Hanging is best defined as the constriction of neck by a ligature tightened by the weight of the body¹. When the point of suspension is over the center of occiput, there is a maximum possibility of occlusion of the arteries and this is known as typical hanging, while all other points of suspension are called atypical hanging ².

In hanging from a high point of suspension, the victim is either fully suspended, with his feet clean off the ground or he is suspended with his knees slightly flexed.

In hanging from a low point of suspension (Partial Hanging), a comparatively little force, about 4.5 kg is enough to occlude blood vessels of the neck. The term Partial Hanging is used for such cases in which the bodies are partially suspended, or for those in which bodies are in a sitting, kneeling reclining, prone or any other posture ³.

The question often arises that is it possible to comment by looking at the site of knot on Neck regarding working hand of individuals using hanging as mean to end life? So it was decided to carry out a prospective study to know whether it is possible or not.

MATERIAL AND METHOD

This prospective study was conducted in all cases of death due to hanging during the year 2004 coming for Postmortem Examination at S.P. Medical College & A.G. of Hospitals, Bikaner. A total of 390 Postmortem were conducted in whole year out of which 35 cases (8.97%) were of hanging.

A detailed history from Police & relatives regarding Socio economic status, Marital status, Habits, Illness (Mental/other diseases/deformity), previous attempted suicide, suicide, suicide note if any etc. were taken. They were also enquired regarding working hand, position of knot, the ligature material used & whether any part of body was touching to ground or not. In cases where the police or relatives failed to communicate regarding position of knot it was determined by examination of ligature mark. A history was also taken that whether in childhood individual was working with left hand & then taught by parents to use right hand.

OBSERVATION & DISCUSSION:

Three hundred ninety cases were brought for postmortem examination during the year 2004 out of which 35 cases were of hanging (8.97%). Out of these 35 hanging cases 33 individuals were working with right hand. In one case the working hand could not be determined as victim was unknown one individual. Was using left hand for writing & right for rest of the work. It has been documented that right-handed individuals constitute about 90% of the human population⁴.

Amongst the 33 individuals working with right hand, position of knot on neck was on right side in 15 cases (45.45%), on left side in 11 cases (33.33%), on center of occiput in 5 cases (15.15%) & on front of neck in 2 cases (6%). Statistically, no significant difference was observed on the knot tied on right side or left side of neck & hence it can be presumed that working hand has no relation with position of knot. Position of knot in unknown victim whose working hand could not be determined was on right side & in victim working with right hand & writing with left hand it was on left side of neck.

Out of 35 cases 26 were (74.28%) were males & 9 females (25.71%) Maximum 16 cases were in the age group of 20-29 years (45.71%) No case was observed in the age group of 0-9 years & there was a single case in the age group of 60 years or above (2.8%). It appears that females use hanging as a method to end life less as compared to males. Its incidence is less in age group 60 years or above.

Out of 34 cases (one unknown), 31 individuals were of low-income group & 18 were married. This finding suggests that poverty & disputes in married life could be an important factor for suicide.

Atypical hanging was observed in 30 cases (85.7%) & typical hanging in 5 cases (14.2%). Findings are consistent with (Reddy 2000) that knot is usually on the right side or left side of neck. Some times the knot is in occipital region & rarely under chin. Dribbling of saliva was observed in 26 cases (74.28%) & discharge of semen in 18 cases (69.23%). The findings are consistent with (Subrahamanyam 2002) that dribbling of saliva is sure sign of hanging having taken place during life. Le facie sympathique was not observed in any cases.

The cardinal signs of asphyxia petechial hemorrhage in the skin of upper, lower limbs & chest were observed in 10 cases but not in sclera or conjunctiva petechial hemorrhage were also not observed on visceral pleurae or pericardium. Congestion & edema of face was seen in 10 cases but congestion & edema of lungs was present in all 35 cases. The cyanosis was observed in 15 cases.

The superior cornu of thyroid cartilage was found torn in 3 cases (8.5%) in the age group of 40 to 60 years but the fracture of hyoid bone & cervical vertebrae were not observed. The findings of present study are not consistent with (Polson 1985)⁵ who found fracture of thyroid cartilage in about 50% of cases but consistent with (Nandi 2001)⁶ that fracture of thyroid cartilage in hanging cases seems to be rarity. The findings of present study are similar with (Jaya Prakash et al, 1999)⁷ that spinal injury is an exceptional event in conventional hanging as opposed to judicial hanging.

Out of 9 females 2 (22.22%) were during menstruation period & 1 (11.11%) was postmenopausal Common household materials like rope, plastic rope, wire, *saree* & *chunni* were used as ligature material & to reach at the site of suspension tables, stool, chairs & cot were used. Commonest point of suspension was hook of fan.

There was one individual who committed suicide by hanging after murder & in rest of the cases dowry death, mental illness, death of nearest relative failure in competition, failure in love, alcoholism & poverty were alleged causes for committing suicide. Only 3 individuals left suicide note.

CONCLUSION

Generally, it is presumed that position of knot with individuals working with right hand should be on the right side of neck, as to tight the knot right hand shall be used & vice versa in individuals working with left hand but findings of present study suggest that working with left hand but findings of present study suggest that working hand has no relation with position of knot on the neck in cases of hanging & it is advised not to comment on working hand by looking at the position of knot on the neck.

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