

## Brief Communication

# Relationship of Menstruation with Suicidal Hanging - An Autopsy Study

N. Vijayakumari<sup>1\*</sup>, J. Magendran<sup>2</sup>

<sup>1</sup>Assistant Professor, Department of Forensic Medicine, Annapoorana Medical College, Salem, Tamil Nadu, India

<sup>2</sup>Assistant Professor, Department of Forensic Medicine, Saveetha Medical College, Chennai, Tamil Nadu, India

Corresponding author email id: \*vijayakumarinagaraj69@gmail.com; <sup>2</sup>drmagi83@yahoo.co.in

## ABSTRACT

The aim of this study was to find out the relationship of menstruation in suicidal hanging. In the present study, 30 cases of deaths due to suicide by hanging in women in their fertile age group, which were brought for autopsy, were selected. Most of the deaths occurred in the age group of 13-30 years (25 cases; 83%). Among them, 23 (77%) were married and the majority of the women, 27 (90%), were educated. It was found that instances of suicide by hanging were almost equal in both the employed (13; 43%) as well as the unemployed (14; 47%) women. In 21 cases (70%), the main reason for committing suicide was found to be marital unhappiness. Among the 30 cases that were studied, 17 (57%) were in menstruating phase. The findings of this study revealed that there is a significant relationship between suicide by hanging in women and menstruation.

**Keywords:** Suicide, Hanging, Menstruation, Marital unhappiness, Chennai

## INTRODUCTION

Premenstrual syndrome (PMS) (also called PMT or premenstrual tension) is a collection of physical and emotional symptoms related to a woman's menstrual cycle. The specific emotional and physical symptoms attributable to PMS vary from woman to woman, and it occurs consistently during the 10 days prior to menses and vanishes either shortly before or shortly after the start of menstrual flow.<sup>[1]</sup> Because of this, women are prone to severe mood changes like irritability, tension, depression, etc. During this premenstrual period, they have a greater risk of harming themselves, even committing suicide, for trivial reasons.<sup>[2]</sup> Suicide by women who are below the age of 50 years imposes a huge social and economic burden on the family as well as the society. Various studies have been carried out in the past to find out the relationship between PMS and suicidal behaviour. However, most of them have been carried out in poisoning cases and in attempted suicide cases. There is a scarcity of studies carried out to find out the relationship between

menstruation and suicidal hanging. Hence, the present study is aimed to find out the relationship between menstruation and suicidal deaths due to hanging.

## MATERIAL AND METHODS

This cross-sectional section study was conducted during 2008 and 2009 at the Institute of Forensic Medicine, Madras Medical College, Chennai, India. A total of 30 cases of deaths due to suicide by hanging in women in their fertile age group, which were brought for autopsy, were selected for the study. Cases with any doubt or suspicion regarding the manner of death, cases brought for autopsy after 48 h of death and cases of women who had undergone hysterectomy were excluded from the study. During autopsy, the tubes, ovaries and uterus were dissected and removed from the pelvis. The uterus was opened from the external os to the fundus. Two short incisions were made in the fundus, from the main longitudinal incision towards each cornu, to expose the endometrium, and the presence of menstrual bleeding was looked for.<sup>[3]</sup> All other required data were collected from

the police report and other findings found at autopsy. Thus, the collected data were statistically analysed.

**RESULTS**

In the present study, 30 cases of deaths due to suicide by hanging in women were studied. The victims belonged to the age group of 13-50yrs. Most of the deaths occurred in the age group of 13-30 years (25 cases; 83%) (Table 1).

Among them, 23 (77%) were married and only 7 (33%) were unmarried. Majority of the women (27; 90%), were educated. It was found that instances of suicide by hanging was almost equal in both the employed (13; 43%) as well as the unemployed (14; 47%) women. In 21 cases (70%), the main reason of committing suicide was found to be marital unhappiness, followed by chronic illness, especially abdominal pain, in 6 cases (20%) and failure in exams in 3 cases (10%). Among the 30 cases that were studied, 17 (57%) were in menstruating phase (Table 2). In the present study, it was found that 13 cases (76.47%) of women who committed suicide due to marital unhappiness were in menstruating phase (Table 3).

**DISCUSSION**

In this study, more than three-fourths of the deaths due to hanging in women occurred in the age group of less than 30 years, which is the most active and productive

age group. About two-thirds of the women were married and having young children. Death of such women leads to major social and economic loss to the family and the society. Marital unhappiness was the main reason for committing suicide in 21 (70%) cases. Among these, 13 cases (76.47%) were in the menstruating phase. Trivial factors like arguments with family members and misunderstanding facts were the main triggering factors. Even unbearable abdominal pain during menstruation was found to be a triggering factor in 20% of the cases. There was no significance in relation to employment and the socio-economic status. Most of the deaths were due to impulsive acts following arguments or fights for trivial reasons. The common materials used for hanging were saree and dupatta, the materials that were readily available at home. This can be related to the irritability and mood fluctuations seen in premenstrual phase.

In 57% of the cases, the women were found to be menstruating at the time of committing suicide by hanging. This suggests that there is a significant relationship between menstruation and death due to suicidal hanging. A similar result was observed by Dogra *et al.*<sup>[4]</sup> They reported that 54.46% of people who died by suicide were menstruating and concluded that menstruation had an association with completed suicides. Various studies have reported that suicidal attempts were more frequent during menstrual cycle or first week, which is consistent with the present study.<sup>[5-9]</sup> However, other studies have concluded that relationship between menstrual cycle and suicidal behaviour does not exist.<sup>[10-12]</sup> Some studies have even reported that PMT is not the sole reason for suicidal behaviour, but other factors like impulsivity, low serotonergic activity and depression can also be attributed, and the risk factor in the fertile age group is definitely varied.<sup>[13]</sup>

**CONCLUSION**

The present study suggests that there is a significant relationship between suicide by hanging in women and menstruation. However, further studies are needed to find out the relationship of other phases of menstrual cycle and suicidal hanging. As PMS is a psychosomatic disease, psychiatric counselling and patient treatment may prevent many such deaths.

**Table 1: Age-wise distribution of suicidal hanging in fertile women**

| Age in years | Number | Percentage |
|--------------|--------|------------|
| 13-20        | 11     | 37         |
| 21-30        | 14     | 46         |
| 31-40        | 3      | 10         |
| 41-50        | 2      | 7          |
| Total        | 30     | 100        |

**Table 2: Relationship between menstruation and suicidal hanging**

|                  | Number of cases | Percentage |
|------------------|-----------------|------------|
| Menstruating     | 17              | 57         |
| Not menstruating | 13              | 43         |
| Total            | 30              | 100        |

**Table 3: Relationship between menstruation and motive of suicide by hanging**

| Reason              | Menstruating | Not menstruating | Total |
|---------------------|--------------|------------------|-------|
|                     | Number (%)   | Number (%)       |       |
| Marital unhappiness | 13 (76.47)   | 08 (61.54)       | 21    |
| Chronic illness     | 04 (23.53)   | 02 (15.38)       | 06    |
| Failure in exams    | -            | 03 (23.08)       | 03    |
| Total               | 17           | 13               | 30    |

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