

## Study on Negative Autopsy Rate at Forensic Medicine Department of Dhaka Medical College

\*Biswas H,<sup>1</sup> Das TC,<sup>2</sup> Swapon MR<sup>3</sup>

Autopsy means postmortem examination of body. Main objects of autopsy are to find out the cause of death, manner of death, time since death and to identify the unknown victim etc. The present study was carried out to find out the possible rate of negative autopsy at Dhaka Medical College, Dhaka. A total of 8,489 dead bodies were brought to the Forensic Medicine Department of Dhaka Medical College for postmortem examination from 20 different police stations of Dhaka City, during the period of January 1, 1990 to December 31, 1994. After thorough postmortem examination, it was found that in 461 cases no opinion as to the cause or nature of death could be given. Thus, negative rate was found to be 5.4%. Out of negative cases 72.7% were male and 28.7% were female.

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**Key words:** Negative autopsy

### Introduction

The purpose of a medicolegal autopsy is to establish the cause of death and to decide whether it is due to natural or unnatural causes. When gross and microscopical examination, toxicological analysis and laboratory investigations fail to reveal a cause of death, the autopsy is considered to be negative. In the standard text book it is stated that 2-5% are negative of all autopsies.<sup>1</sup> A negative autopsy may be due to inadequate history, lapse in external examination, inadequate or improper internal examination, and insufficient laboratory examination, lack of toxicological analysis and lack of doctors training.

Death from vagal inhibition, status epilepticus, hypersensitivity reaction etc. may not show any anatomical findings. Even if death results from laryngeal spasm in drowning no anatomical findings may be present. Apart from these causes in grossly decomposed bodies it is some time quite impossible to find out the cause or nature of death.<sup>2</sup>

It is not possible to detect certain poison as they are very quickly metabolized in the body, for example, barbiturate and alcohol. Occasionally the cause of death literally unascertainable, the Coroner is entitled after due inquiry to return such a finding.<sup>3</sup> The rate of negative autopsy in one government Medical College in Dhaka city had been studied where the investigators found negative autopsy rate a little higher than it is stated in the text book.<sup>4</sup> The rate of negative autopsy cases is not yet studied in Dhaka Medical College in the same city. The present study was carried out to find out the possible rate of negative autopsy at Dhaka Medical College, Dhaka.

1. \*Dr. Haridas Biswas, Assistant Professor, Forensic Medicine Department, Dinajpur Medical College, Dinajpur, Bangladesh
2. Professor Dr. T C Das, Professor, Forensic Medicine Department, Sir Salimullah Medical College, Dhaka, Bangladesh
3. Professor Dr. Mostaque Rahim Swapon, Professor, Forensic Medicine Department, Rajshahi Medical College, Rajshahi, Bangladesh

\*For correspondence

## Methods

This study was conducted retrospectively at the Forensic Medicine Department, Dhaka Medical College, Dhaka. All the records such as postmortem examination reports, chemical examination reports and pathological reports preserved at the Forensic Medicine Department were carefully studied and the data thus collected was edited, tabulated and analyzed by using simple statistical tests to draw a conclusion.

## Results

Out of 8,489 cases, no opinion could be given in 461 cases. Table-1 shows that highest percentage of negative autopsy is in 1993 and average percentage of autopsy is 5.9%. Table-II shows that the percentage of negative autopsy in male (72.7%) is higher than female (28.7%).

Table I: Distribution of percentage of yearly negative autopsy

Year	Total No. of post-mortem examinations	Total No. of negative autopsy	%
1990	1680	84	5.0
1991	1642	96	5.8
1992	1532	82	5.4
1993	1815	107	5.9
1994	1820	92	5.1
Total	8489	461	5.4

Table-II: Distribution of sex in negative autopsy

Year	Total No. of negative autopsy (%)	Male (%)	Female (%)
1990	84	58 (69.0)	16 (27.6)
1991	96	73 (76.0)	23 (24.0)
1992	82	65 (79.3)	15 (23.1)
1993	107	73 (68.2)	24 (32.9)
1994	92	66 (71.7)	18 (27.3)
Total	461	335 (72.7)	96 (28.7)

## Discussion

The negative autopsy rate determined at the Forensic Medicine Department of Dhaka Medical College reflects the total picture of undiagnosable causes of deaths. Rahman and associates studied on a sample of 294 autopsy cases to find out negative rate at Forensic Medicine Department of Sir Salimullah Medical College, Dhaka during one year period from January 1992 to December 1992. They found a negative rate of 6.9% which is higher than that mentioned in standard text book (3-5%).<sup>4, 3</sup> Sample size of our study is 8,489 and includes five years period. The negative rate of our study is 5.4% which is a little less than that of Rahman et al (p = 0.2) but slightly higher than that of text book. The little increase of negative rate of two studies in Dhaka city may be due to inadequate history, insufficient laboratory examination facilities and inadequate toxicological analysis service.

In the study of Sir Salimullah Medical College male and female cases were 72.6% and 27.3%, respectively which is similar to our study (72.7% and 28.7%, respectively). This may be due to fact that males were more exposed to external environment than females. It may be said that the methods of crime are changing rapidly, so it is imperative that investigative facilities should be more sophisticated and easily available

## Conclusion

From the study we can say that the negative autopsy rate is still a little bit higher even in the topmost specialist centre of Bangladesh. It may be expected that it will also be higher in the other postmortem centers of Bangladesh. To minimize the negative autopsy rate we can recommend to improve the facilities for postmortem diagnosis.

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