

An Observation Cadaveric Assessment of Abdominal Aorta in Low Socio-Economic Group**Md. Afzal Hussain**

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Conflict of interest: Nil

Abstract**Aim:** The aim of the present study was to assess the abdominal aorta in low socio-economic group.**Methods:** The Observation study was conducted on approximately 50 cadavers which were brought to the dissection hall of the Department of Anatomy and also on bodies brought to the forensic Medicine and Toxicology Department for post mortem examination.**Results:** In male group, short length varying range from 9 -10 cm with mean of 9.8 cm was measured in 10 cases. In females in this category the range of length was observed varying from 9 -9.5 cm. with mean of 9.4 cm in 8 cases. (b) Median length varying with mean value of 10.9 cm were found in 8 cases of males and median length was observed 10 cm in 6 cases with mean value of 10 cm. (c) Large length: in males the range observed was 11-12.5 cm. with mean value 12.48 cm in 9 cases. In females, it was observed varying from 11-12 cm with mean value of 11.2 cm in 7 cases.**Conclusion:** The study of abdominal aorta was conducted on 15 male and 15 female cadavers of age group varying 25-55 years from low socio-economic group, brought to the dissection hall. Dimension of aorta was carefully measure and its length, thickness of the wall, diameter, volume and extent were observed with differences in accordance with those of the workers of another field.**Keywords:** abdominal aorta, low socio-economic group

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Introduction

The incidence of abdominal aortic aneurysms (AAAs) in people older than 65 years in Canada ranges from 1% to 5%. [1,2] Surgical management is the most common form of management, with survival rates in the range of 70% at 5 years. [3-5] One potential predictor of survival after AAA repair is socioeconomic status (SES), which has been identified as a key factor in health inequality globally. [6-9] It is defined as the individual factors relating to social position or economic situation, such as income, occupation level and educational attainment, but may also include area-level factors such as average neighbourhood income and neighbourhood deprivation indices. [10] Notably, SES has been found to be associated with increased mortality after other major elective cardiovascular procedures, including coronary artery bypass grafting. [11]

Among those who undergo aneurysm repair, it is unclear whether socioeconomically disadvantaged patients are more likely to have this done as an emergency procedure. [12,13] Although the use of endovascular aneurysm repair (EVAR) has increased substantially over the past 15-20 years

[14,15], the evidence linking socioeconomic disadvantage and method of repair is mixed. [16-18] The much less invasive nature of EVAR means that it is increasingly being used in higher-risk patients, including older patients in whom AAA is considerably more prevalent [13,20]. However, variation in the use of EVAR in relation to socioeconomic disadvantage in the older population has not been investigated. Survival after AAA repair may be worse in patients experiencing socioeconomic disadvantage [19-21], although this has not been found in other studies. [18,22]

The aim of the present study was to assess the abdominal aorta in low socio-economic group of population.

Materials and Methods

The Observation study was conducted on approximately 50 cadavers which were brought to the dissection hall of the Department of Anatomy, Kalinga Institute of Medical Sciences (KIMS) KIIT University, Bhubaneswar, India for one year and also on bodies brought to the forensic Medicine and Toxicology Department for post mortem

examination. The solution was added to infusion metal beaker or flask suspended to a height. It was left so that all the solution may run into femoral artery. The body was then left for three days. On the fourth day a dilute solution of the Plaster of Paris and red lead was injected forcefully into the same femoral artery. This process was done to visualize the arteries better with red colour and hard consistency.

50 Cadavers were dissected for the present series of work on "Study of abdominal Aorta". The cadavers were obtained from the Department of Anatomy, Kalinga Institute of Medical Sciences (KIMS) KIIT University, Bhubaneswar (India). The dead bodies belonged to low socioeconomic group.

Results

Table 1: Baseline characteristics

Gender	Male	Female
	27 (54)	23 (46)
Short length	9.8 (Range 9-10 cm)	9.4 (Range 9-9.5 cm)
	Male	Female
	10	8
Median length	10.9 cm	10 cm
	Male	Female
	8	6
Large length	12.48 (Range 11-12.5 cm)	11.2 (Range 11-12 cm)
	Male	Female
	9	7

In male group, short length varying range from 9 - 10 cm with mean of 9.8 cm was measured in 10 cases. In females in this category the range of length was observed varying from 9 -9.5 cm. with mean of 9.4 cm in 8 cases. (b) Median length varying with mean value of 10.9 cm were found in 8 cases of males and median length was observed 10 cm in 6 cases with mean value of 10 cm. (c) Large length: in males the range observed was 11-12.5 cm. with mean value 12.48 cm in 9 cases. In females, it was observed varying from 11-12 cm with mean value of 11.2 cm in 7 cases.

Discussion

In a larger context, Bennett and colleagues [23] found lower SES, defined by median household income of corresponding zip code, to be associated with increased postoperative mortality across 13 major surgical procedures spanning several specialties in the United States. In a review of more than 80 articles from numerous countries, Li and colleagues [24] identified SES to have a statistically significant impact on outcomes after orthopedic surgery. In a US population of older patients, Birkmeyer and colleagues [25] also found lower SES (defined on the basis of area-based US census data) to be associated with higher operative mortality across a wide range of surgical procedures. The age range of the population studied closely overlapped that of patients undergoing AAA repair. In the area of vascular surgery, Durham and colleagues [26] found lower income to be associated with inferior limb salvage after femoropopliteal revascularization in the US.

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cases. In females in this category the range of length was observed varying from 9 -9.5 cm. with mean of 9.4 cm in 8 cases. (b) Median length varying with mean value of 10.9 cm were found in 8 cases of males and median length was observed 10 cm in 6 cases with mean value of 10 cm. (c) Large length: in males the range observed was 11-12.5 cm. with mean value 12.48 cm in 9 cases. In females, it was observed varying from 11-12 cm with mean value of 11.2 cm in 7 cases. Adas and colleagues [17] found increased long-term mortality after AAA repair in more socioeconomically deprived quintiles. Our study differed from that study in several ways, including the health care contexts in which it was performed. In New Zealand, Khashram and colleagues [19] found increased long-term mortality with higher deprivation scores; however, this result may have been confounded by the inclusion of ruptured AAAs and differing definitions of deprivation.

Conclusion

The study of abdominal aorta was conducted on 15 male and 15 female cadavers of age group varying 25-55 years from low socio-economic group, brought to the dissection hall. Dimension of aorta was carefully measure and its length, thickness of the wall, diameter, volume and extent were observed with differences in accordance with those of the workers of other field.

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