

Short Article

**Prevalence of surgical conditions among rural population of Southern Karnataka, India**

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**Abstract**

**Introduction:** Surgical care is increasingly recognised as an important component contributing to global health, yet data for the burden of surgical disease are scarce. Even after half a century of independence, not more than 20% of the population have any access to basic surgical services. **Objectives:** To assess the prevalence of common surgical conditions and factors associated among people residing in Mugalur Subcentre, Anekal taluk, Bangalore. **Materials and Methods:** This was a cross-sectional study conducted among 500 individuals aged between 18-70 years using two-staged stratified random sampling technique in 9 villages under Mugalur Subcentre, rural Karnataka. **Results:** Of the 500 study subjects 239 (47.8%) were males. Majority (59.2%) were in the age group between 21- 40 years and 111(22.2%) had no formal education. Also 155(30.9%) were belonging to class III SES, 54(10.8%) are alcoholics, while 52(10.4%) are smokers. Prevalence of surgical conditions was found to be 34(6.8%). Most common surgical illness were swelling 14(2.8%), ulcer 11(2.2%) followed by haemorrhoids, hernia, varicose veins and breast lump. There was no statistically significant association found prevalence of surgical conditions with age, gender and occupation. We found that among the people who had surgical conditions majority of them seek surgical care from Government hospitals. **Conclusion:** Prevalence of common surgical conditions was 6.8%, with no significant associations. To create awareness about the common surgical conditions among the people and to help them seek treatment from hospital

**Key words:** prevalence, surgical conditions, rural Karnataka, India.

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**Introduction:**

Surgery is an essential component of health care system but has generally been neglected within global public health. Surgical conditions are defined as “any treatment that includes suture, incision, excision, manipulation, or other invasive procedure that usually, but not always, requires local, regional, or general anaesthesia”.<sup>i</sup>Surgical conditions are diverse and occur in every phase of the life-cycle.

Recent figures show that not more than 20% of the population have any access to basic surgical services. (National Human Development Report 2013).<sup>ii</sup>This situation can be improved only if there is adequate number of rural surgeons in India where surgery is affordable and available near the patient's residence.

**Need for the study:**Surgical care is increasingly recognised as an important component contributing to global health, yet data for the burden of surgical disease especially in rural areas is scarce.<sup>iii</sup>To explore the necessity of surgical services in a

primary care setting and to improve the health services for the surgical needs.

**Objectives:**To assess the prevalence of common surgical conditions among people residing in Mugalur subcentre, Anekal taluk, Bangalore&To identify the factors associated with these surgical conditions.

**Methodology:**

A cross sectional study was conducted among adults aged above 18 years residing in 9 villages under Mugalur Subcentre, Sarjapur PHC, Anekal Taluk, Bangalore District during March to April 2015. Sample size was calculated to be 456 (500).We used two-staged stratified random sampling technique in 9 villages under Mugalur Subcentre, rural Karnataka.List of all people aged >18yrs was collected from the Health Management and Information System (HMIS) data, Proportion of sample allocated to each village was determined. Each village stratum was divided into 6 strata based on the age distribution Proportionate number of samples was then randomly selected by lottery method.The common surgical conditions assessed in the study were swelling, ulcer, piles, hernia, varicose vein, abscess, cellulitis, PVD and breast lump. Adults thus enlisted, were interviewed after taking consent.

People in the age group of 18-70 years who are residents of 9 villages of Mugalur sub-center area for more than 1 year were included and seriously ill or bedridden and not able to give information excluded.Sample Size(n) = **234**;Considering non response rate of 10%, sample size was calculated to be 256.

This study was approved by the Institutional Ethical Committee. After establishing rapport with the participants, the purpose and procedure of the study was explained. Informed written consent was obtained from the participants and the interview schedule was administered to the participants.

**Statistics and analysis of the data:**

The data was entered and coded in Microsoft Excel and analysed using SPSS version 16 for proportions,

frequencies and associations. Measures of central tendency, dispersion and chi square tests were used to analyse data. We considered p value of less than 0.05 as significant. When more than 20% of cells in tables had value less than 5, then we considered Fisher’s exact test for significance.

**Results:**

**Table1:Details of medical illness and habits**

Variable	Category	No	%
Habits	Alcohol	54	10.8
	Smoking	52	10.4
	Chewable tobacco	41	8.2
Medical illness	Hypertension	16	3.2
	Diabetes	32	6.4
	Both	25	5
Surgical condition	Present	34	6.8
	Absent	466	93.2

**Table 2: Gender Specific Prevalence of surgical conditions**

GENDER	MALE	FEMALE
SWELLING	<b>8(1.6%)</b>	<b>6(1.2%)</b>
ULCER	5(1.0%)	<b>6(1.2%)</b>
PILES	2(0.4%)	3(0.6%)
HERNIA	1(0.2%)	0
VARICOSE	0	1(0.2%)
ABSCCESS	0	1(0.2%)
CELLULITIS	0	0
PVD	0	0
BREAST LUMP	0	1(0.2%)

Of the 500 study subjects 239 (47.8%) were males. Majority (59.2%) were in the age group between 21-40 years and 111(22.2%) had no formal education. Also Majority of them were in class II & III socio economic class (modified BG Prasad), while 53% belonged to nuclear family. Major occupation was agriculture (33.8%) and also majority of the population (35%) were housewives. Smoking and alcohol was found to be in 10.4% and 10.4% of the individuals while 6.4% &3.2% had history of diabetes and hypertension

Surgical conditions were noted only in 6.8% of clients (Table 1) and swellings and ulcers were predominant in both sex( Table 2)

## Discussion:

Prevalence of common surgical conditions in the Mugalur subcentre, rural area of Southern Karnataka was found to be 6.8% and there are no comparison studies to correlate with this prevalence of common surgical conditions while there are some studies on common surgical procedures.<sup>iv</sup> Most common surgical illness were swelling 14(2.8%), ulcer 11(2.2%) followed by haemorrhoids, hernia, varicose veins and breast lump. This result is in line with the common surgical conditions seen in the peripheries. Age and gender specific prevalence is given in table 3 and 4, where swelling is common in the age group of 21-40 years in males, ulcer in 31-40 years which is common in females. This also depends on the individuals interviewed and the surgical conditions they are aware of. Factors like age, gender and occupation were not found to be associated with these surgical problems. We found that among those who had surgical conditions majority of them sought surgical care from Govt hospitals (Vani Vilas) followed by a private hospital at Sarjapur.

## List of references:

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<sup>ii</sup>Human Development Report 2013. The Rise of the South: Human Progress in a Diverse World. Published for the United Nations Development Programme (UNDP)

<sup>iii</sup>[GroenRS](#) et al. Untreated surgical conditions in Sierra Leone: a cluster randomised, cross-sectional, countrywide survey. *Lancet.* 2012 Sep 22;380(9847):1082-7. doi: 10.1016/S0140-6736(12)61081-2. Epub 2012 Aug 14

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**Conclusion:** Prevalence of common surgical conditions was 6.8%, with no significant associations. The study results will help to know the common surgical conditions in the rural areas and the services we need to provide. Also we can create awareness about the common surgical conditions among the people and to help them seek treatment from hospital.

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**Conflict of interest:** Nil

