



A Review of Outpatient Pregnant Females with Urinary Tract Infection(UTI)

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Introduction

UTI is a condition with significant disease burden in all women but with limited population data in Singapore. Pregnant patients are especially at increased risk of developing UTI as their physiological changes predisposes them to it. This study aims to profile the epidemiology and bacteriology of pregnant women with UTI at a tertiary referral centre.

Aim

This study aims to profile the epidemiology and bacteriology of pregnant women with UTI at KKH.

Method

Random sampling of urine cultures done in outpatient pregnant female patients in a 6 month period in 2016 was performed. A total of 291 patients were identified for this study from the 24hr Emergency Clinic and outpatient subsidized clinic. The clinical features, demographics and outcomes were studied in this population through review of medical records.

Results

Table 1: Patient's demographics

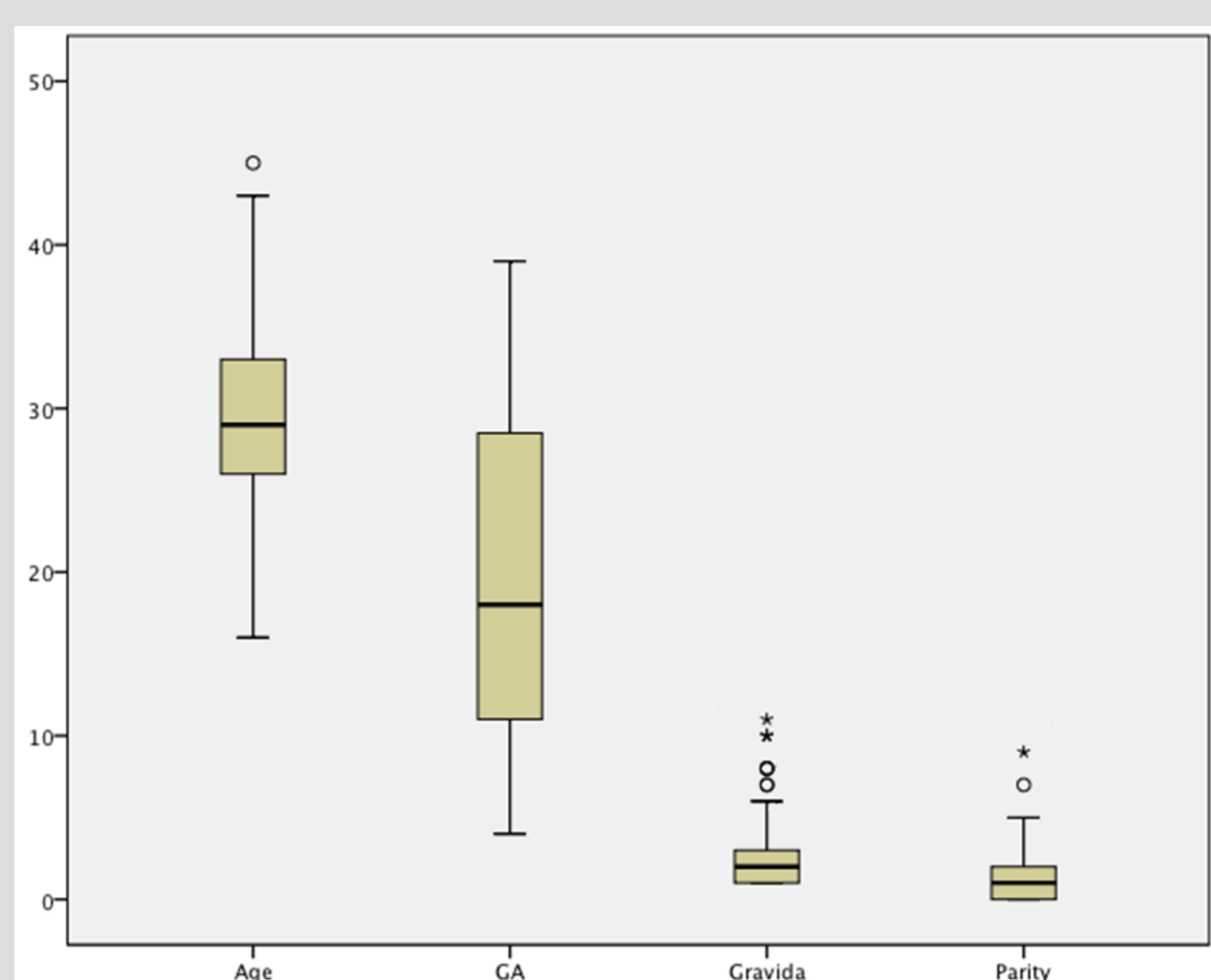
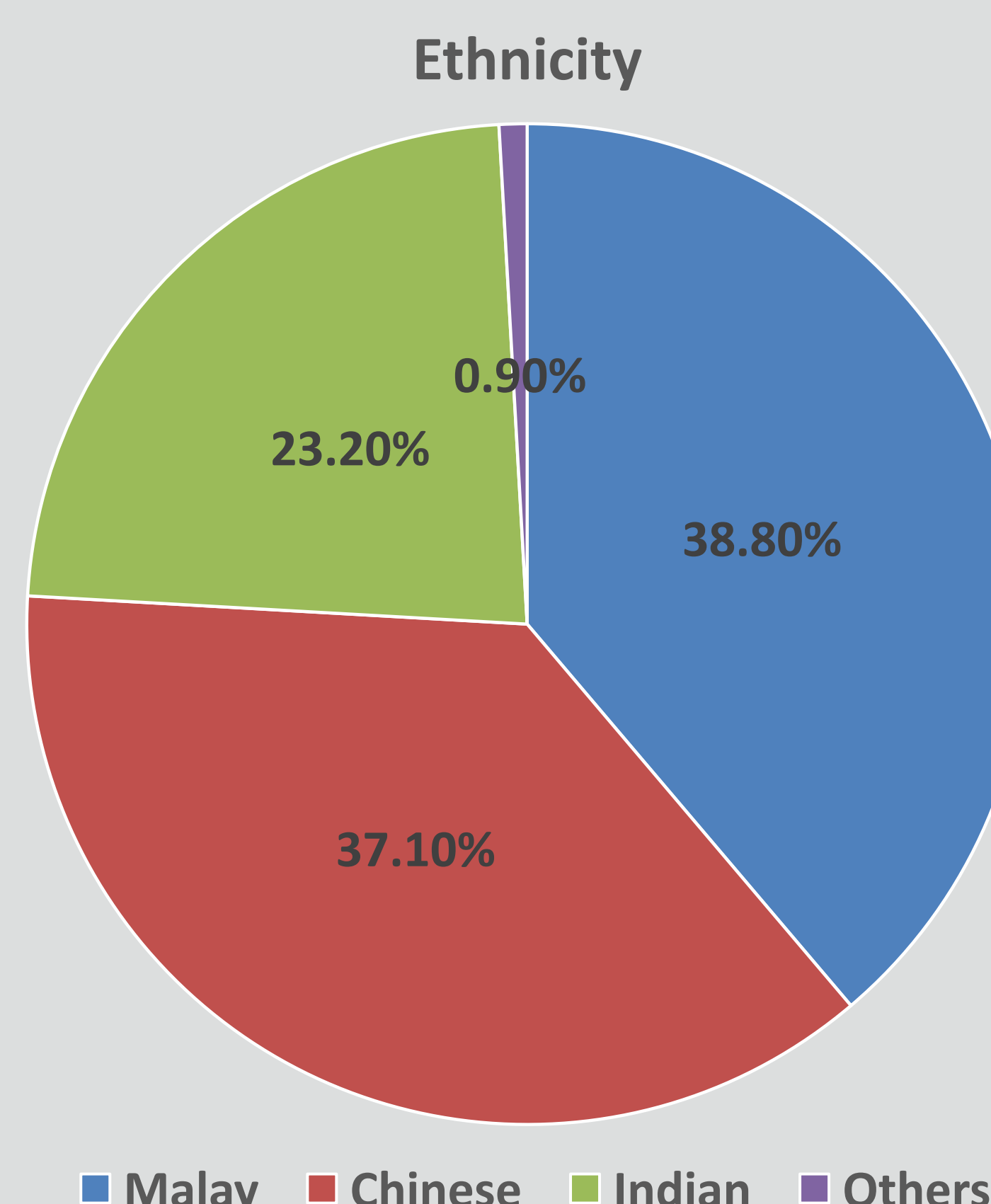


Figure 1: Ethnicity



Mean age of patients was 29.6. The average gestational age was 16.6 weeks. 38.8% were Malay with significant differences in racial makeup. 37.1% were Chinese, 23.2% Indians and 0.9% of other races. Of the patients who presented with a positive urine culture, 36.8% were not treated with antibiotics.

PRESENTATION

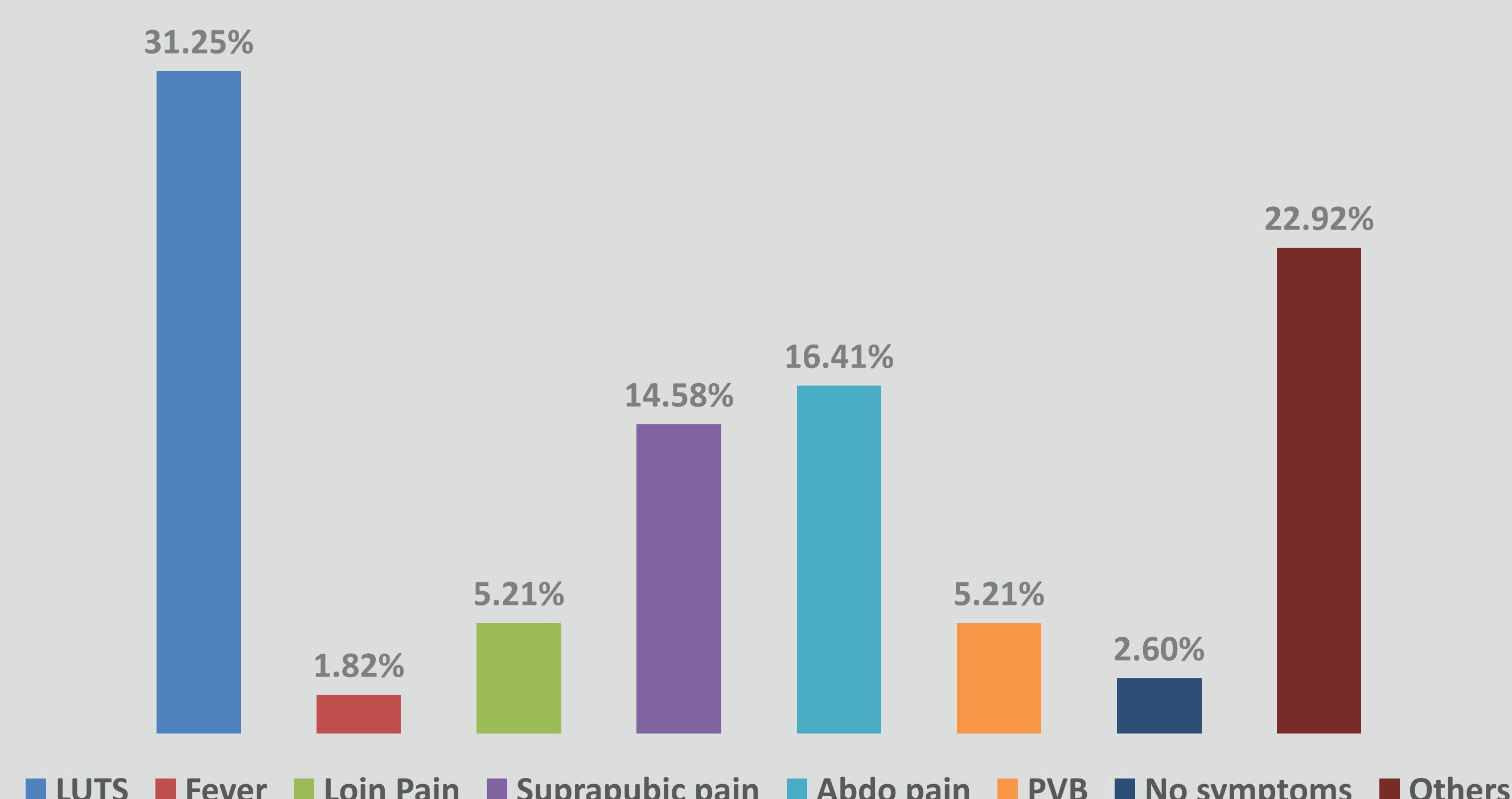


Figure 2: Presenting symptoms

The proportion of pregnant patients who present with asymptomatic bacteriuria is higher compared to previous studies. A study done by Andriole *et al*¹ mentions that asymptomatic bacteriuria occurs in 2-7% of the population.

In terms of clinical presentation, these patients tend to present with urinary symptoms such as dysuria or abdominal pain. Other symptoms that patients present with are vomiting and per-vaginal discharge. Most patients whom we studied were healthy with no comorbidities. 4.5% of the study group eventually required inpatient treatment for their UTIs.

In our study, none of the patients who were untreated for asymptomatic bacteriuria developed pyelonephritis. This is significant as compared to study done by Vazquez *et al*² which shows that up to 30% of mothers eventually develop pyelonephritis.

The predominant uropathogens commonly isolated in this population were mixed bacterial growth, *Escherichia coli*, *Streptococcus agalactiae* and *Klebsiella pneumoniae*. In the outpatient setting, cephalexin and nitrofurantoin were most commonly used.

Limitations

This study is a retrospective and this is subjected to database bias. A prospective review and closer study of pregnancy outcomes like birthweight of the children of affected mothers can help us to better understand the relation between UTIs in pregnancy and its consequences in pregnancies.

Conclusion

UTI is most common in Malay pregnant ladies. They mostly present with dysuria and abdominal pain. The most common mixed bacterial growth in the urine cultures and treated commonly with cephalexin. There is also a significant percentage of patients with pyuria who are not treated with antibiotics which can lead to significant adverse perinatal outcomes.

Acknowledgement

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References

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- ² Smail FM, Vazquez JC. Antibiotics for asymptomatic bacteriuria in pregnancy. *Cochrane Database Syst Rev* 2015; :CD000490.