

Side Effects Due to Antituberculous Treatment in Extrapulmonary Tuberculosis Patients and Associated Risk Factors

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INTRODUCTION

Tuberculosis is an infectious disease caused by the bacterium *Mycobacterium tuberculosis*. Tuberculosis can occur in pulmonary and extrapulmonary sites. Since antituberculous treatment is a long-term treatment process, drug side effects are frequently encountered. The aim of this study is to detect and classify the side effects of antituberculous treatment in patients with extrapulmonary tuberculosis and to determine the possible risk factors.

METHODS

297 extrapulmonary tuberculosis patients treated with antituberculous treatment at Bezmialem Vakıf University Hospital were divided into two groups: those who developed side effects (n=91) and those who did not (n=206). Side effects were classified and the treatment day on which they occurred was recorded. Risk factors such as age, gender, diabetes, hypertension, hepatitis B infection (HBV) and malignancy were recorded and their contributions to the development of side effects were evaluated. Statistical evaluation of the data was performed using the SPSS.28.V program.

RESULTS

Side effects were detected in 31% of the patients. Among those 35% had hyperuricemia, 29% had allergic reactions, 23% had hepatotoxicity, 21% had gastrointestinal intolerance, 10% had neuropathy, 7% had malaise, 7% had visual impairment, 1% had pancreatitis and 1% had ototoxicity. No significant relationship was found between “diabetes, HBV, malignancy, age” and the development of side effects. Female gender and hypertension were found to be significant risk factors for the development of side effects (female gender $p<0.001$, hypertension $p<0.05$).

CONCLUSION

Hyperuricemia was the most common side effect. Hypertension and female gender were significant risk factors for the development of side effects in patients with extrapulmonary tuberculosis receiving antituberculous treatment. Our results should be confirmed with further studies.

Side Effects	Median (Min-Max) (Day)
Hyperuricemia	14,5 (5-320)
Allergic Reaction	15,5 (1-376)
Hepatotoxicity	24 (3-374)
Gastrointestinal System Intolerance	9 (1-88)
Neuropathy	97 (15-320)
Malaise	10 (8-329)
Visual Impairment	24 (4-80)
Pancreatitis	15
Ototoxicity	9

Table 1: Median time taken for onset of drug side effects.

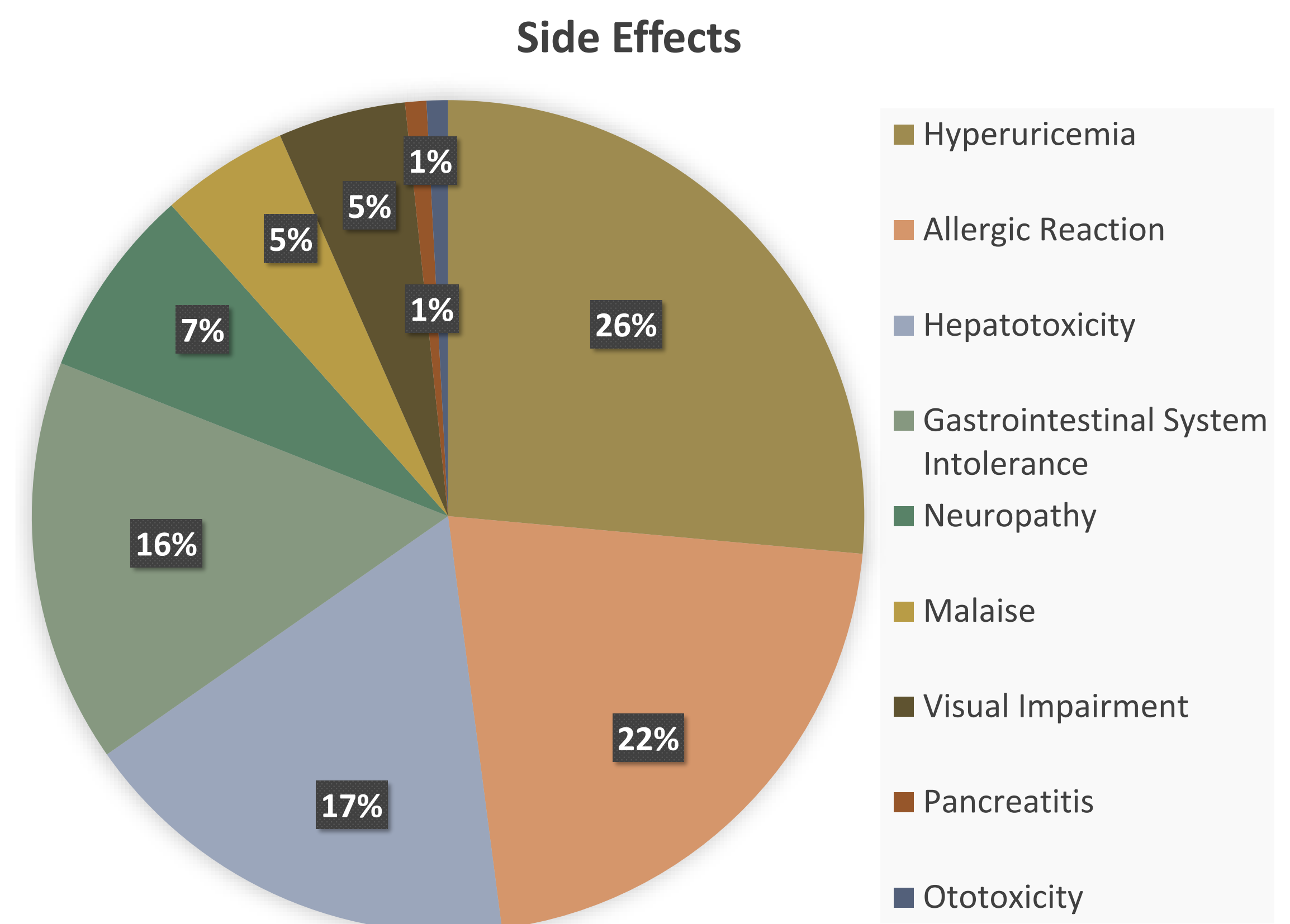


Figure 1: Side effects developed in patients and their percentages.

		Patients Without Drug Side Effect (n=206)	Patients With Drug Side Effect (n=91)	P _a	P _b
Gender	Male	73 (%35)	14 (%15)	0.00	-
	Female	133(%65)	77 (%85)		
Diabetes		24 (%12)	11 (%12)	0,914	-
Hypertension		40 (%19)	28(%31)	0,032	-
Hepatitis B Infection		5 (%2)	2 (%2)	-	1,00
Malignancy		11 (%5)	4 (%4)	-	1,00
Age	18-39	82 (%40)	34 (%37)	0,728	-
	40-59	72 (%35)	30 (%33)		
	60+	52 (%25)	27 (%30)		

Table 2: Risk factors associated with developing drug side effects.
p_a: Pearson Chi-Square p_b: Fisher's Exact Test

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