COST OF FAMILIAL MEDITERRANEAN FEVER (FMF) DISEASE IN TURKEY

*Aksu K[1], Dokuyucu O[2], Ertenli AI[3], Gul A[4], Karaaslan Y[5], Kasapcopur O[4], Kiraz S[6], Onat AM[7], Ozdogan AH[4], **Ozbalas T[2]**, Ozen S[6], Saylan M[2], Senturk A[8], Tatar M[6], Tuna E[6], Turanli M[9], Yalcinkaya F[10]*

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Objectives

Familial Mediterranean Fever disease (FMF) is an autosomal recessively inherited disease characterized by recurrent, self-limited febrile attacks with serositis, synovitis, and occasionally skin involvement. AA amyloidosis is the most serious complication of FMF and can be life-threatening. Daily colchicine is considered standard of care, and is expected to prevent attacks and amyloidosis in most patients. The objective of this study is to estimate the cost burden of FMF in Turkey from payer perspective.

Methodology

Delphi technique was applied to determine the type and the amount of resources used in FMF based on physicians views. The Delphi method solicits the opinion of an expert panel through a carefully designed questionnaire which in this case included questions on: type, frequency and duration of the health care resources used for diagnosis and treatment of the disease, epidemiology of the disease and colchicine resistant patients. Ten key opinion experts were involved in the study. Colchicine resistant FMF (CrFMF) patients are defined by consensus as patients who have ≥ 1 attacks per month despite maximum tolerable dose of colchicine treatment for 6 months period. The responses were analyzed and discussed in a face to face meeting followed by consensus building steps. Unit costs of resources used were obtained from Reimbursement Guideline-List of Procedure Fees Per Service.

Results

The prevalence of the disease is estimated 0.1%. Colchicine resistant FMF (crFMF) patients are defined by consensus as patients who have ≥ 1 attacks per month despite maximum tolerable dose of colchicine treatment for 6 months period. 65% of patients are responders to colchicine treatment, 30% are partial responders and 2-5%* are colchicine resistant. The cost of diagnosis was 374,59TL, cost of standard treatment was 2.476,64 TL, cost of treatment for colchicine resistant patients was 68.136,25 TL per patient. The cost of treatment of two major complications, amyloidosis and renal failure were estimated as 8.628,98 TL and 24.180,00 TL respectively. The annual total cost of the disease to the SSI was found approximately as 190 million TL without complications and 223 million TL with complications.

Major complications of FMF disease	Incidence
Amyloidosis*	8-12%
Renal Insufficiency	5-10%
Infertility	5-10%
Chronic Arthritis	2-5%

* The rate will increase in case of insufficient treatment.

Cost of Familial Mediterranean Fever (TL)	
Diagnosis Cost	374,59
Standard Treatment Cost	110,93
Attack Cost (emergency service)	94,75
Grand Total	580,27

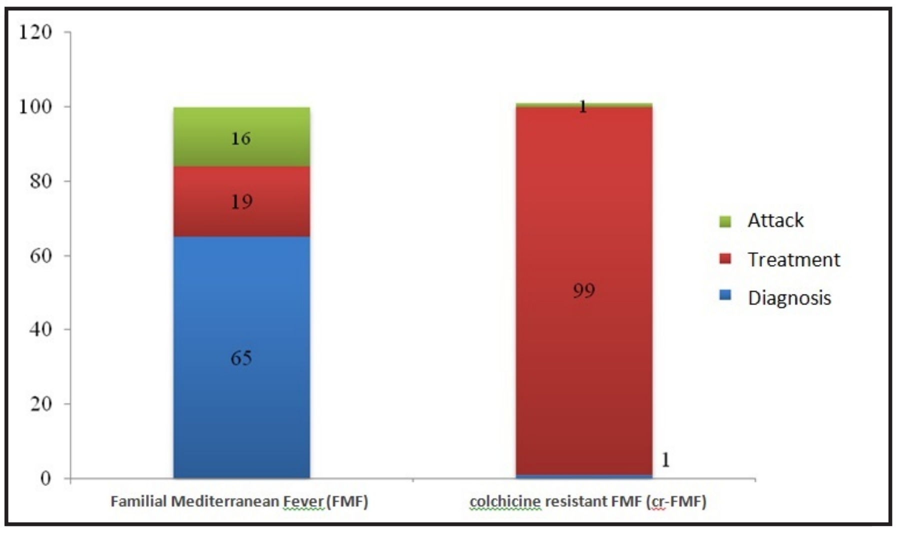
Diagnosis Cost	374,59
Treatment cost of patients resistant to colchicine (TL)	63.319,73
Attack cost (patients resistant to colchicine)	568,48
Grand Total	64.262,26

Epidemiology	
2013 general population	76.667.864
FMF prevalence (%)	0,1
Population with Familial Mediterranean Fever *	76.668
Prevalance of patients resistant to colchicine (%) **	3
Population of patients resistant to colchicine	2.300
Population of patients not resistant to colchicine	74.368

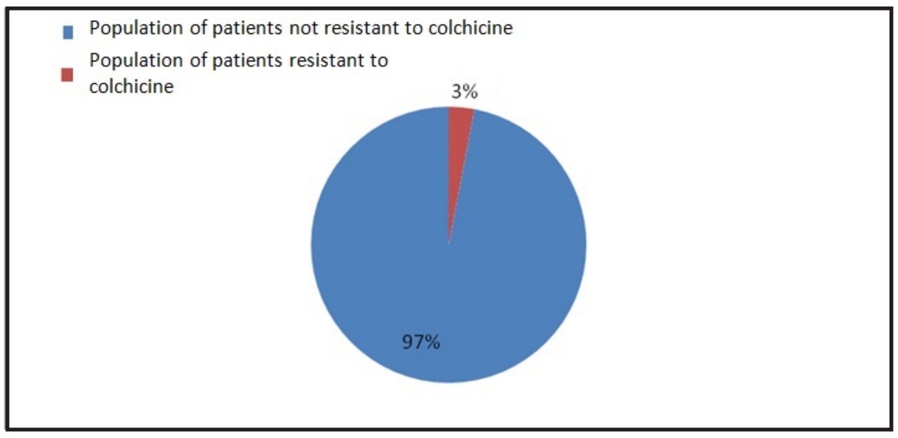
* It is predicted that the FMF population given in the table will be low due to reasons such as difficulty in access to healthcare services, etc.; however, in this study, calculations were made based on the methodologically potential number of patients.

** The prevalence of patients resistant to colchicine was given as 2-5% in Delphi Panel, and the average value was set as 3% in calculations.

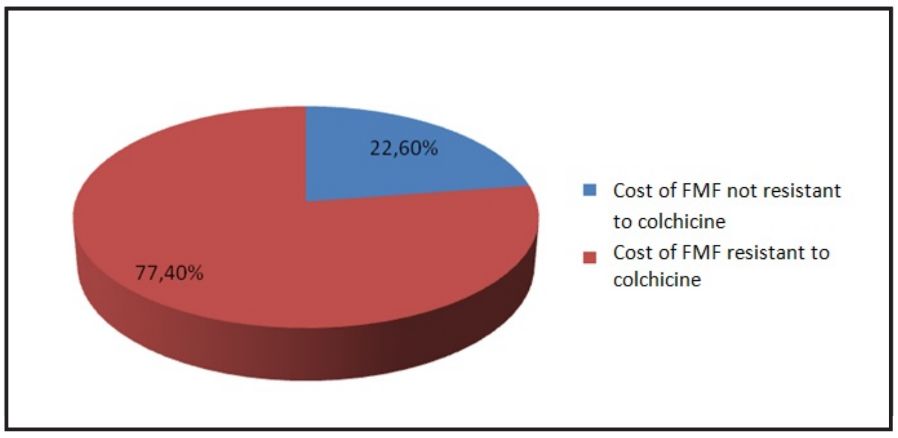
Distribution of Diagnosis, Attack and Treatment Costs Among Total Costs (%)



Distribution of the Population of Familial Mediaterranean Fever (%)



Distribution of the Cost of FMF Disease Without Complications for SSI (%)



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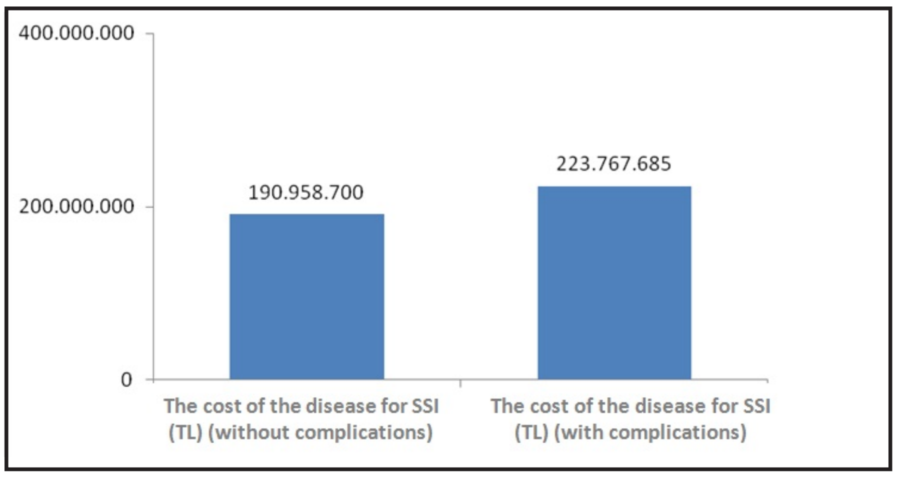

Conclusion

Though FMF is highly prevalent in Turkey, a very small portion of patients are resistant to standart cholchicine treatment and unmet need is very high for colchicine resistant patients. Unless it is treated, the burden of disease is dramatically increasing with long term complications.

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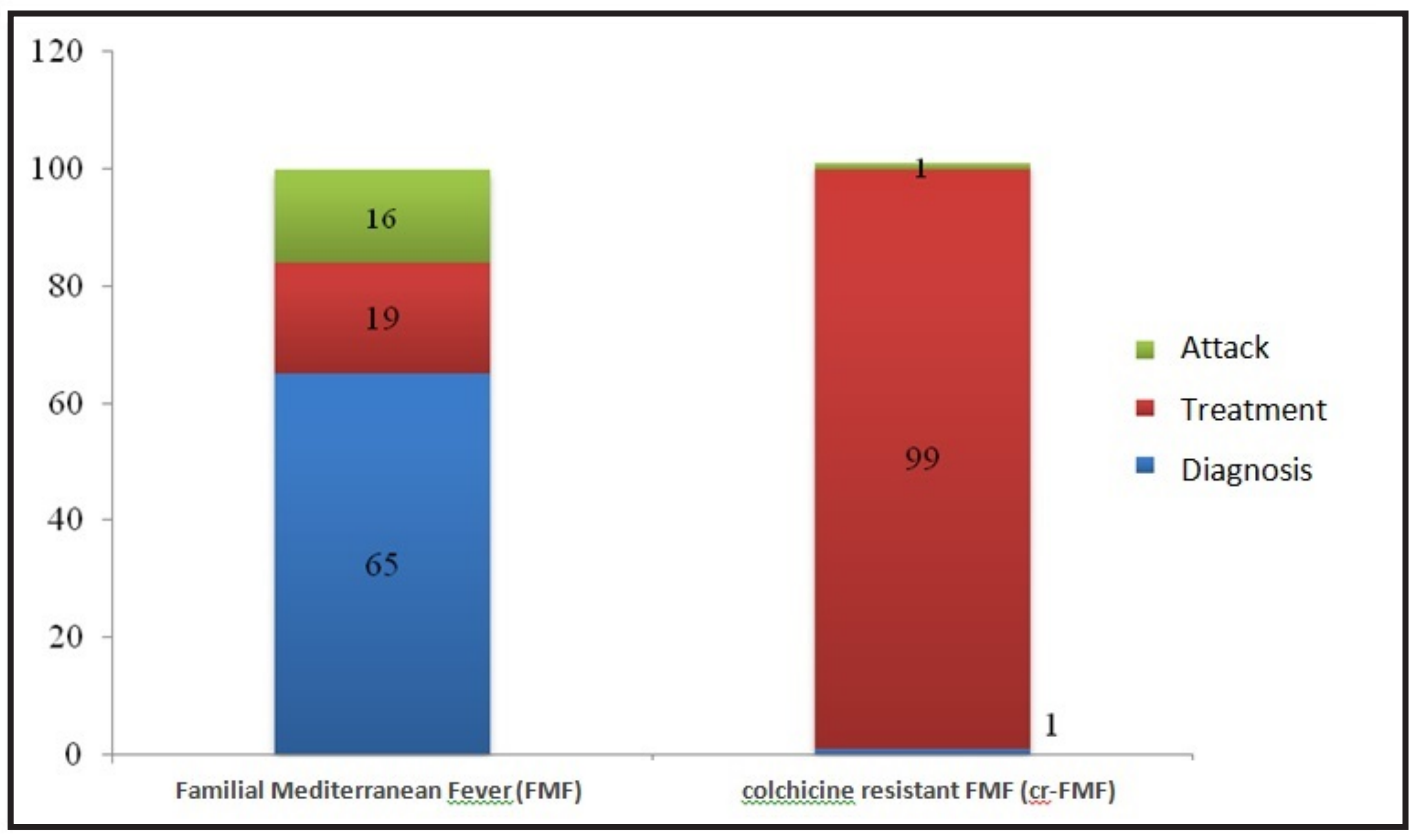

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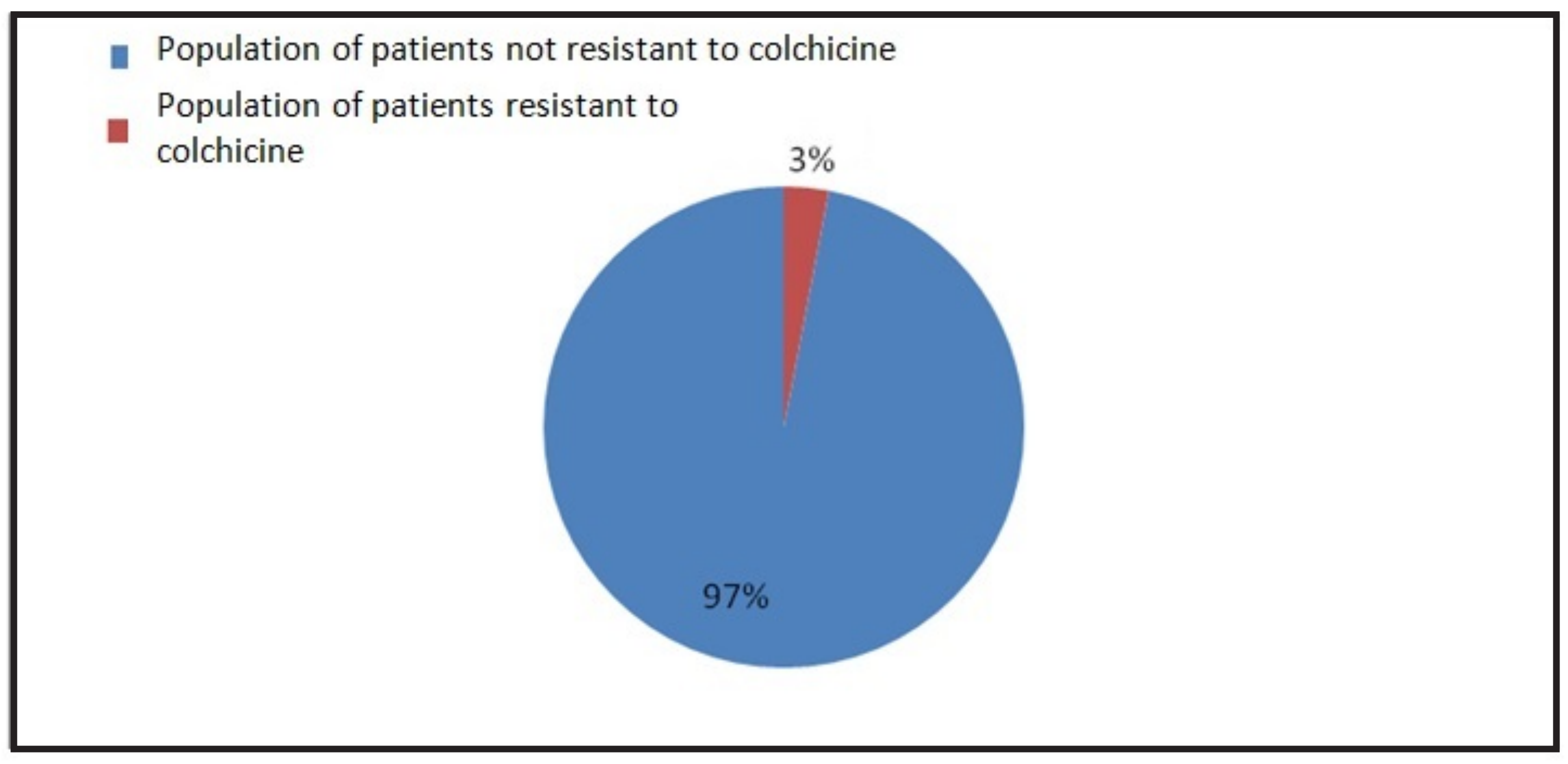

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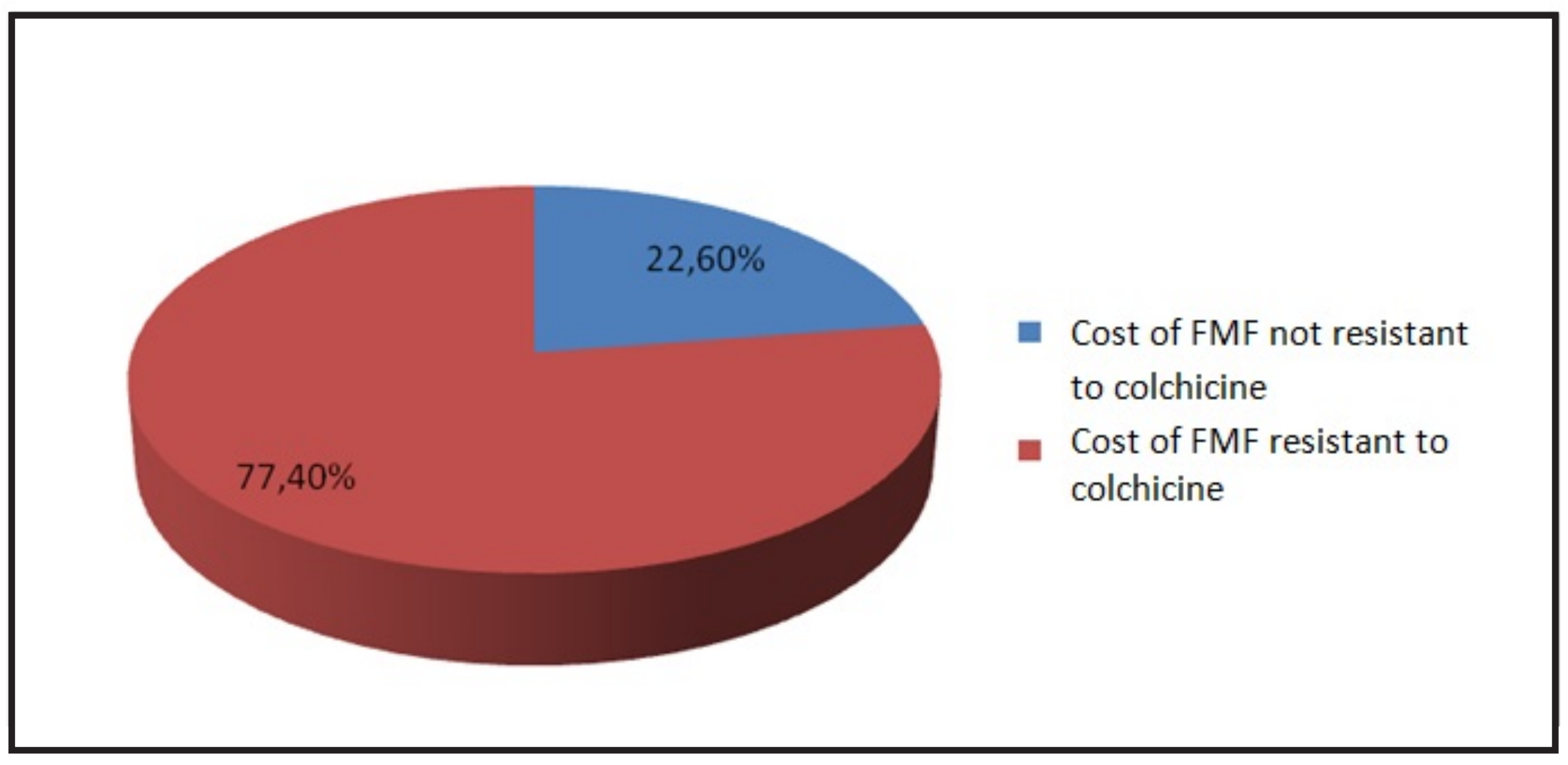

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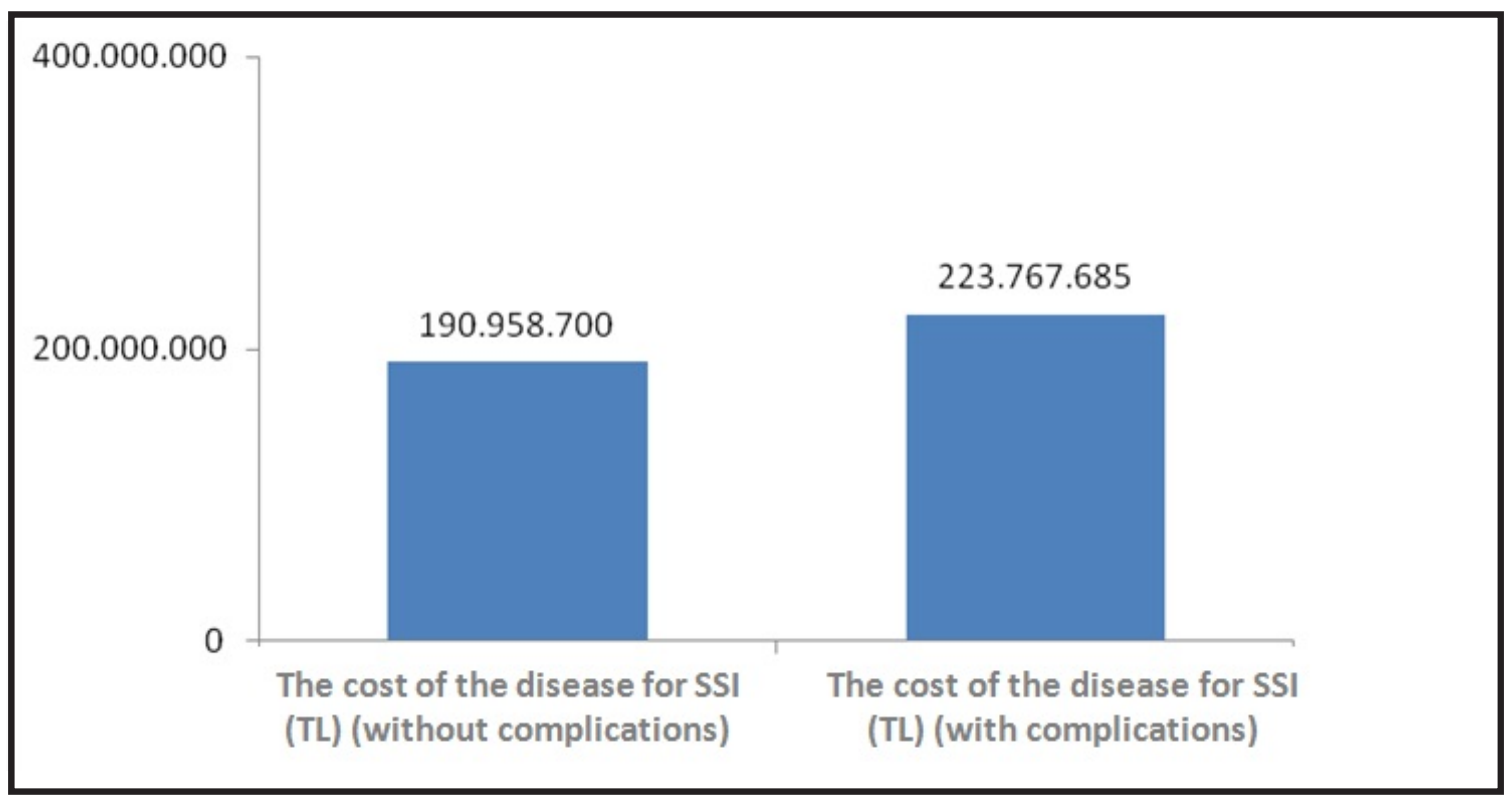

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