

## Spontaneous rupture of malarial spleen: two case reports and review of literature

### ABSTRACT

Turkey's southeast Anatolia has a high prevalence of Malaria, which is one of the most common diseases in the area. In 1992, there were 18676 cases reported in Turkey, and Diyarbakir city had the highest incidence (4168 cases), followed by SanliUrfa city (3578 cases). In 1994 and 1995, Malaria was more prevalent with 84 345 and 82 094 cases being diagnosed. The occurrence of spontaneous rupture of the malarial spleen is uncommon. In 1998, we observed two cases of chloroquine treatment on male patients who were suffering from an acute malaria attack. One patient had abdominal pain and palpitations, followed by fainting, while the other had abdominal pain coupled with fever. The spleen was found to be enlarged during explosive laparotomy in both patients. Both patients had a splenectomy. In the English literature published since 1961, we have identified 15 spontaneous ruptures of the spleen. The importance of malaria as a major medical issue is increasing due to travel to endemic areas and resistance to antimalarial drugs. Surgeons are increasingly turning to the region of southeast Anatolia in Turkey as an alternative to treating malaria. Travelers should take precautionary measures during this season.

### INTRODUCTION

The absence of dystrophin and its associated proteins can result in the phenotype of muscular dystrophy, as they are believed to play a crucial role in maintaining the integrity of the extracellular matrix and the membrane of muscle cells. The DAPC is composed of various protein complexes that are either directly or indirectly linked to dystrophin. The four transmembrane proteins known as sarcoglycans are organized by a fifth protein called spirochaplusia, which is believed to play cAMP signalling roles at the cell membrane. The dystroglycan complex, which interacts directly with dystrophin in the cytoplasm and laminin on the extracellular matrix, serves as a structural link between the interior and exterior of the cell. A third subcomplex includes dystobrevins and syntrophines, both of which have an unknown function. Recently, the yeast two-hybrid method was used to identify desmuslin (DMN), an -dystrobrevin-interacting protein. Both mRNA and protein are expressed mainly in cardiac and skeletal muscle and contain genes that encode a novel intermediate filament (IF) protein of 1253 amino acids. Electron microscopic analysis indicates that desmin and desmin can colocalize with each other. During co-immunoprecipitation experiments, it was discovered that the desmuslin and -dystrobrevin interaction involves the region of protein encoded by exons 8-16 of desmin (precisely similar to human cDNA) and domains 1A-2A of the desmin rod domain. Desmuslin is hypothesized to act as a mechanical support for the muscle myofibers by creating an unrecognized interface between the extracellular matrix and the Z-discs through desmin and plectin. Human genetic disorders, such as congenital and adult onset myopathies, have been associated with the involvement of several IF proteins, including desmin (desmin), which may also play a role in myopathy. This possibility is supported by the exclusive expression of DMN in skeletal and cardiac muscle. We examined 71 patients with different forms of muscular dystrophy and myopathy for mutations in the DMN gene, finding 9 single-nucleotide polymorphisms (SNPs) that do not alter the protein sequence but 12 that modify the residue they encode. Our research has revealed that no controls are probable origins of the phenotype, but

our findings are applicable for disequilibrium studies of this region of chromosome 15q26.3 and for studying mutation analysis and association in other genetic disorders.

## CONCLUSION

In summary, our findings highlight the significance of combining functional and structural approaches to understand molecular interactions. The x-ray structure of the MS2 RNA-protein complex shows that certain types of contacts have little or no impact on its stability. Figure 4 demonstrates the significance of our results by schematically illustrating the important interactions at A-4 and A-10 within the structure of the entire translational operator. Val29 and Lys61 have significant stabilizing interactions with both A-3, while Thr45, Ser47 and TH59 have highly asymmetric contributions. The interaction between Thr45 and A-4 is the primary factor that affects binding, while both Ser47 and TF59 only affect A-10.