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Phenytoin induced toxic epidermal necrolysis

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Toxic Epidermal Necrolysis (TEN) is a rare, life threatening skin reaction that is usually drug-induced. Anti-convulsants such as phenytoin, carbamazepine and phenobarbital and some antibiotics such as co-trimoxazole, quinolones and cephalosporins have been identified as common causes of drug-induced TEN. TEN has many serious complications including dehydration, increased energy expenditure and local or systemic infections. Many studies and case reports were published in the literature supporting the association between phenytoin and the development of TEN. Also many other factors can put the patient at higher risk for developing TEN while on phenytoin those include advanced age, malignancy and radiation exposure. More than one mechanism has been proposed to explain TEN pathophysiology. Hypersensitivity due to toxic metabolites of involved drugs is one theory. Genetic basis for drug-induced TEN has been proposed where there is inherited or acquired deficiency in phase 2 detoxification enzymes. Few studies have also indicated an association between HLA*1502 and phenytoin induced TEN. Family history of hypersensitivity reactions to medications should be documented and discussed with the patients. TEN's treatment requires multidisciplinary approach to identify and withdraw the causative agent, controlling fluid and temperature homeostasis, preventing multi-organ damage, and treating systemic complications. Supportive therapy is the main strategy of treatment. Phenytoin-induced TEN carries a high mortality and morbidity rate, so accurate diagnosis and rapid treatment is essential to treat and prevent complications. It's vital to make sure that the "right" patient is taking the "right" dose of the "right" medication. Medications history documentation with special drug allergy card indicating any history of drug reaction is recommended.

Biography

Osama M Al-Quteimat has completed his Master degree in clinical pharmacy at the age of 26 years from University of Jordan. He is a board-certified oncology pharmacist working as clinical pharmacist in King Abdullah Medical City, a leading healthcare institution providing high-quality tertiary and quaternary healthcare, education and research in Saudi Arabia-Makkah. His main interests include pharmaceutical care, oncology pharmacy and patient education. He has published many papers in the field of clinical pharmacy in reputed journals.

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