

PESTİSİTLERLE ZEHİRLENMELER

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Pestisidler doğada, insan veya hayvanlar üzerinde, bitkilerde yaşayan ve zararlı etkilere yol açan böcek, kemiriciler, mantarlar ve mikroorganizmaların olumsuz etkilerini azaltmak, yok etmek için kullanılan kimyasallara ya da biyolojik maddelere verilen genel isimlerdir. Bu maddelere maruziyet çeşitli yollarla görülebileceği gibi en sık gastrointestinal sistem, mukozalar ve göze maruziyet şeklinde görülür. Pestisitler 3 ana gruba ayrılır:

1. Böcek öldürücüler (insektisidler)
2. Kemirici öldürücüler (rodentisidler)
3. Yabani ot öldürücüler (herbisidler)

1. İnsektisidler

A) Organofosfatlar ile zehirlenmeler

Organofosfat (OP) bileşikleri hem ev hem de endüstriyel ortamlarda kullanılan çeşitli kimyasal gruplardır. Organofosfat örnekleri olarak insektisitlerden (malation, paration, diazinon, fenitron, diklorvos), sinir gazı (sarin, tabun), oftalmik ajanlar (ekotiofat, izoflurofat) ve antihelmintikleri (trichlorfon) içerir.

Patofizyoloji

Organofosfat içeren ilaçların ana etki mekanizması asetilkolinesterazın (AChE) inhibisyonudur. AChE, nörotransmitter asetilkolini (ACh) kolin ve asetik aside indirgeyen bir enzimdir. ACh merkezi ve periferik sinir sistemi, nöromüsküler

kavşaklar ve kırmızı kan hücrelerinde (RBC) bulunur. AChE inaktive edildiğinde, ACh, sinir sistemi boyunca birikir ve muskarinik ve nikotinik reseptörlerin aşırı uyarılmasıyla sonuçlanır. Klinik etkiler, otonomik ve merkezi sinir sistemlerinin aktivasyonu ve iskelet kası üzerindeki nikotinik reseptörler aracılığıyla kendini gösterir.

Organofosfatlara deri yoluyla, oral alım, inhalasyon veya enjeksiyon yoluyla maruz kalınabilir. Çoğu hasta hızlı bir şekilde semptomatik hale gelmesine rağmen semptomların başlangıcı ve şiddeti spesifik bileşiğe, miktara, maruz kalmanın yoluna ve maddenin metabolik emilimine bağlıdır.

Belirti ve bulgular

Organofosfat zehirlenmesinin belirtileri ve semptomları Muskarinik, Nikotinik, Merkezi sinir sistemi (CNS) etkileri adı altında üç ana kategoriye ayrılabilir.

a. Muskarinik bulgular:

Organofosfatların muskarinik etkilerini hatırlamak için kullanılan anımsatıcı araçlar SLUDGE (salivasyon, lakrimasyon, üriner inkontinans, defekasyon, GI ağrı, emezis) ve DUMBELS (diyaforez ve urinasyon, miyozis, bradikardi, bronkospazm, bronkoverte, emezis, lakrimasyon ve salivasyon). Organ ve sistemik düzeyde muskarinik etkiler ile verilen muskarinik etkiler ise;

Belirti ve bulgular

Sık bulguları bulantı, kusma, karın ağrısıdır ancak yüksek doz maruziyetinde gastrointestinal sitemde hasar, renal hasar, rabdomyoliz ve ölüm görülebilir.

Öykü ve tanı

Diğer tarım ilaçlarında zehirlenmelerde olduğu gibi maruziyet şüphesi tanıda en önemli aşamadır. Tanı için spesifik bir yöntem bulunmamaktadır. Öykü ve klinik bulgular yol göstericidir. Serum elektrolit düzeyleri, renal fonksiyon testleri, karaciğer fonksiyon testleri, kan gazları tanıya yardımcıdır.

Tedavi

Dekontaminasyon sağlanıp hastanın vital bulgu stabilizasyonu gereksirse temel ve ileri yaşam desteği uygulamasından sonra yapılacak tedavi end organ hasarına yönelik destekleyici tedavidir. Bileşiklerin atılımını sağlayabileceğinden idrar alkalinizasyonu denenebilir. Toksik bulgular genellikle görülmez, semptomu olmayan hastalar 4-6 saat gözlem sonrasında taburcu edilebilir. Şiddetli semptomları olan vital bulgu stabilizasyonu sağlanamayan hastalarda hastaya yatış gereksinimi vardır.

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