

Decorporation therapy. The "Precautionary approach" versus the "Urgent approach"

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1 Background

In case of a nuclear accident or a terrorist attack by a „dirty bomb“, there is a risk of contamination and incorporation of radionuclides besides external irradiation. A treatment by chelators and adsorptive agents is particularly effective when started early for pharmacokinetic reasons. Starting decorporation therapy without knowing the committed effective dose may however unnecessarily expose the patient to the side-effects of the medication. The question at issue is:

1. Delay the therapy to wait for the results of internal dosimetry?
2. Start the therapy promptly on spec?

2 Method

Selective review of the literature.

3 Results

Many authors stress the importance of the committed effective dose to decide on the necessity of decorporation therapy (“precautionary approach”). It is acknowledged that therapy is more effective when started early and that internal dosimetry takes time. But excepted for iodide, clear cut rules on when to start the treatment are not formulated. A Canadian defense source states that starting decorporation without a previous dose assessment requires a case by case decision. On the other side, official French guidelines recommend to start treatment “à priori” within 2 hours after a suspected incorporation.

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4 Conclusion/Prospect

Excepted for iodide there is no internationally accepted standard on when to start a decorporation therapy. In consideration of the higher effectiveness and the low side-effects of a short-term treatment, it seems reasonable to start decorporation therapy as soon as possible, even before the committed effective dose has been assessed. The decision of continuation or discontinuation of the therapy should be taken after internal dosimetry is completed on the basis of the committed effective dose.