

<<Nuclear Medicine-核医>>

图书基本信息

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### 内容概要

The improvement of textbooks is an important part of curriculum construction in the university. To meet the needs of the foreign students' education , as well as the English teaching and bilingual teaching in the Capital Medical University , we have tried to develop the English textbook of nuclear medicine. It is a great challenge to edit the English textbook for us. We sincerely hope that this textbook can meet above needs.

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## 章节摘录

版权页：插图：1.2.7 Consideration before Nuclear Medicine Performing

1.2.7.1 Radiopharmaceuticals interaction with drugs There is considerable evidence that radiopharmaceutical biodistribution or pharmacokinetics may be altered by a variety of drug. For example, interactions leading to poor organ visualization may require a procedure to be repeated, thereby resulting in excess (unnecessary) irradiation of organs or even misdiagnosis.

1.2.7.1.1 Desirable drug interaction of radio-pharmaceuticals Drugs interaction with radiobiocomplexes (DIR) can be successfully used in certain examinations, such as: (1) Adenosine and dobutamine in cardiac evaluations. (2) Acetazolamide in brain imaging. (3) Furosemide for evaluations of obstructiveuropathy. (4) Captopril in the studies of nonvascular hypertension. (5) Cholecystokinin in the hepatobiliary evaluations for confirming chronic calculous biliary disease.

1.2.7.1.2 Undesirable drug interaction and the bioavailability of radiopharmaceuticals (1) Drugs or pharmaceuticals with iodide in their formulation, may directly affect thyroid imaging. Somatostatin also interferes with thyroid imaging through the same mechanism; Inorganic iodine-containing medications such as Lugol's iodine as well as some vitamin/mineral supplements, are thought to release iodine thereby decreasing the specific activity of iodide in the body pool; Perchlorate and pertechnetate ions, act as competitive inhibitors of the iodine transport mechanism. This can lead to decreased uptake of I sodium iodide. (2) Cytotoxic and antimetabolites drugs such as cyclophosphamide, vincristine, cytarabine and methotrexate, are reported to affect the pharmacokinetic response of radiopharmaceuticals, particularly the tumor seeking radiopharmaceutical Ga. (3) Over 20 medicines have the potential to interfere with the biodistribution of radioiodinated, meta-iodobenzylguanidine (MIBG), sometimes many hours after they have been taken. Among those, the most commonly encountered interacting agents are chlorpromazine; clomipramine, diltiazem, dopamine, fluphenazine, labetalol, mazindol, nifedipine, promethazine and salbutamol. This interference is enough to impact the efficacy of MIBG as a diagnostic and therapeutic modality because of the extremely low quantities of radiolabeled MIBG that are present in the organ. Therefore, it is recommended that treatment with any potentially interacting drug be stopped one week prior to imaging with MIBG.

编辑推荐

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