

UVOD

Razvoj medicinske tehnologije u poslednjih nekoliko decenija doveo je do nastanka fascinirajućih "imidžing" tehnika, kao što su kompjuterizovana tomografija (CT), pozitronska emisiona tomografija (PET) i magnetna rezonanca (MR). Ove tehnike su omogućile vizualizovanje bilo kog dela tela u živih osoba. Međutim, za analiziranje snimaka dobijenih ovim tehnikama, kako u zdravih osoba tako i u bolesnika sa različitim oboljenjima i poremećajima, neophodno je u određenoj meri poznavanje anatomije preseka. To naročito važi za anatomске preseke mozga. U ovom atlasu snimci "magnetic resonance imaging-a" (MRI) upoređeni su sa odgovarajućim anatomskim presecima centralnog nervnog sistema.

MR ispitivanje mozгова vršeno je na dvema osobama, kao i na lešu koji je bio perfundovan formalinom. Korišćene su dve različite sekvence u toku MR ispitivanja, to jest, produženo T1 odnosno T2. Obe ove vrste MRI snimaka prikazane su u atlasu. Snimci su urađeni u aksijalnoj, koronalnoj i sagitalnoj ravni.

Koristili smo tri mozga za anatomске preseke. Svaki mozak je perfundovan izotoničnim fiziološkim rastvorom i formalinom. Nakon zamrzavanja, mozgovci su serijski sečeni u tri glavne ravni. Debljina isečaka bila je 10 mm. Konture isečaka, kao i dubokih struktura mozga, crtane su na paus-papiru.

Crteži u ovom atlasu kombinovani su sa MRI snimcima koji su načinjeni u istom nivou kao i odgovarajući anatomski preseki. Na taj način, lokacija i izgled svakog dela mozga na crtežima mogu da se uporede sa onima na MRI snimcima. Zato, ovaj atlas mogu da koriste studenti, kao i specijalizanti iz neurologije, neurohirurgije i neuroradiologije. Atlas može da bude koristan i za specijaliste u spomenutim oblastima medicine.

INTRODUCTION

The development of medical technology in the last few decades resulted in the fascinating imaging techniques, such as the computerized tomography (CT), positron emission tomography (PET) and the magnetic resonance (MR). These techniques enabled the visualization of any part of the body in living individuals. However, to analyze the imaging scans in both the healthy individuals and in patients with various diseases and disorders, it is necessary to have a certain degree of knowledge in sectional anatomy. This is especially true for the sectional anatomy of the brain. In this atlas, the magnetic resonance imaging (MRI) scans are compared to the corresponding anatomical sections of the central nervous system.

The MR examination of the brain has been made in two persons, as well as in a cadaver perfused with formalin. Two different sequences have been used in MR examination, that is, the T1 and T2 weighted. Both sorts of these MRI scans are presented in the atlas. The scans have been taken in the axial, coronal and sagittal planes.

We have used three brains for the anatomical sections. Each of them was perfused with isotonic saline solution and formalin. After having frozen them, the brains were serially cut in the three main planes. The thickness of the slices was 10 mm. The contours of the slices, as well as of the deep structures of the brain, were drawn on a tracing paper.

The drawings in this atlas are accompanied by the MRI scans made at the same level as the corresponding anatomical sections. In this way, the location and appearance of each part of the brain in drawings can be compared to those on the MRI scans. Hence, this atlas can be used by the students, as well as the residents in neurology, neurosurgery and neuroradiology. It can also be useful for the specialists in the mentioned branches of medicine.