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PROTECTIVE SCREENS FOR PERSONNEL DOING RESEARCH WORK WITH A TROCHOSCOPE AND FOR THE PROTECTION OF PHYSICIANS INVESTIGATING THE OSSEOARTICULAR SYSTEM

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PROTECTIVE SCREENS FOR PERSONNEL DOING RESEARCH WORK WITH A TROCHOSCOPE AND FOR THE PROTECTION OF PHYSICIANS INVESTIGATING THE OSSEOARTICULAR SYSTEM

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From the Central Order of Lenin Institute of Hematology and Blood Transfusion (Director -- Member of the Academy of Medical Sciences USSR and Honored Scientist Professor A. A. Bagdasarov).

Dosimetric investigations conducted by V. P. Vikturina, E. Ye. Troitskiy, and others in the State Scientific-Research Institute of Roentgenology and Radiology have shown that the maximum permissible level of irradiation of physicians "is significantly exceeded in the presence of investigations of the gastrointestinal tract with a trochoscope." In other points of the working site, the level of irradiation did not exceed the maximum permissible dose -- 0.05 r per working day.

In their conclusions the authors propose to ensure the protection of physicians in the presence of investigations with a trochoscope, as well as in the presence of the investigation of the osseoarticular system by the physician in a consulting room.

The question raised by the authors is of very great current interest and requires quick solution. It should be underlined that one has to resort to trochoscopy not only in investigations of the gastrointestinal tract, but also in the roentgenoscopy of the organs of the thoracic cage. In addition, it is necessary in trochoscopy to protect not only the physician, but also the nurse, without whose aid it would be impossible to conduct an investigation of the intestines.

We wish to communicate our experience in the organization of the protection of personnel in trochoscopy and the

investigation of the osseoarticular system.

Fig. 1

A piece of leaded rubber 111 x 60 cm in diameter, inserted in a metallic frame, serves for the protection of the physician (see Fig. 1a). On the inner side of the lateral metallic plates at mid-length are found two hooks, with the aid of which a "little" screen is inserted into the longitudinal cuts of the support, along which the screen can be advanced any distance.

For the protection of the nurse in trochoscopy we use a "large" screen, consisting of a somewhat changed protective screen of the "Rentok" factory; it is wider (130 cm) and lower (150 cm); it is so designed that the nurse can conveniently hold the hook in irrigoscopy (see Fig. 1b). The "large" screen also serves to protect the physician when he takes photographs of the osseoarticular system; for this purpose the screen is located near the writing table of the physician and

behind his chair. In this position the screen protects the nurse at the time of roentgenoscopy, when the physician is at the X-ray screen.

Our dosimetric measurements showed that both screens reliably protect personnel; the dose per working day does not exceed 0.05 r.

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