

Update: 27.09.2021 Reutlingen

I. Notes and suggestions concerning post-mortem examination (autopsy) of deceased in connection with Corona-vaccination

Main focus

- thrombo-embolic events (as macro-/microthrombi)
- vasculitis
- myocarditis
- peculiar inflammatory reactions (auto-immune-reactions?)
- foreign material

I.1. Inspection of the body:

- Careful inspection of the entire integument
- discoloration in allergic-eczematous reactions, e.g. brown coloring in cases of hemosiderosis in the context of leucoclastic vasculitis

Tissue-samples from the location of the vaccination (subcutaneous and muscle tissue);

Asservation of axillary lymphnodes of the side of injection and any enlarged lymph nodes

Checking the lower leg veins and especially in persons bedridden, checking of the veins in the soles on thrombi,

I.2. Body caves

Opening of the three body caves according to common practice. Histological sampling from all organs and unusual lesions (infarctions, bleedings, thrombi etc.)

I.2a. Thorax

Check on thromboembolism by cutting the vessels. Checking on focal lesions.

Possibly in-toto-fixation of both lungs and preparation by serial section.

Histological samples from the heart muscle in different localizations. Optionally examination of the conduction-system, especially in cases of sudden-heart-death - region of atrio-ventricular-node (Aschoff-Tawara-node)

I.2b: Abdomen

Special attention to spleen (histology) and Peyersche Plaques. Cutting the liver veins up to the periphery (Veno-Occlusive Disease). Ovar (allegedly foreign material deposits).

I.2c: brain

Examination on infarctions / bleedings

If possible, fixation in toto and neuropathological examination after fixation. Special attention: vena terminalis.

Asservation of the hypophysis.

Critical: examination of the eyes in case of visual problems of the deceased.

examination of the inner ear in patients with loss of hearing.

I.3. Tissue sampling

Routine sampling from all organs, in addition to the above mentioned samples:
Sampling from all recognizable lesions, especially thrombi with vascular wall
Sampling of striated muscles, at least 2 localizations, in any case lower leg muscles
Bone marrow samples from 2 different haematopoietic-active areas
Sampling from the Glandula Parotis (autoimmune phenomena?)

I.4. General considerations

Photo documentation of all relevant changes and important normal findings. Organ-preservation until the histological samples have been assessed, for the purpose of possible further examinations.

Embedding of the histological samples compatible for additional immunohistological / PCR investigations (virus fragments).

If there is no relevant autolysis, asservation for electron microscopy - search for virus particles / fragments, unaccustomed materials etc.

II. Evaluation of organ samples from deceased or biopsies from living patients after corona - vaccination

- microscopy, histology, immunohistochemistry -

II.1. In any case and on all organs:

- Search for double refracting elements
- Stains: HE, PAS, iron
- Spike protein detection (anti-SARS-CoV spike protein antibody) by immunohistochemistry

II.2. In case of inflammation, further definition by Immunohistochemistry, depending on the histological picture

- CD 3 (T lymphocytes)
- CD 4 (helper cells)
- CD 8 (cytotoxic lymphocytes)
- CD 14 monocytes
- CD 20 B lymphocytes
- CD 56 cell adhesion
- CD 68 macrophages
- CD 31/ D2-40 endothelium
- Complement

- II.3. If a so-called "breakthrough vaccination" is suspected, i.e. corona infection in spite of vaccination:
- Confirmation by demonstration of SARS-CoV-2 RNA or nucleocapsid
 - If possible electron microscopy

III. **Further approach**

With the consent of relatives and probably the prosecutor, paraffin embedding and histological sections (HE, PAS, FE) of all organs. Asservation of lesions, including the location of vaccine application. Consiliar examination by a reference pathologist.
Thereafter, depending on the findings, establishment of further investigations by cooperating special laboratory or in a reference laboratory.

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