

## INTRODUCTION

Acute or subacute neurological complications following SARS-CoV-2 (COVID-19) infection have been reported in the literature but there is only a few case reports about postcovid or covid related ADEM and transverse myelitis.

## CASE

A nine-year-old male patient who had not any underlying disorders or medication history admitted to emergency room. He was unconscious, his GCS was 8 (E:2,V:2,M:4). Six weeks ago his parents were enfeeted COVID-19 and he lost sense of smell too. Also 4 days earlier he had fever, nausea, vomiting, and diarrhea. His EEG showed delta coma. Brain MRI revealed bilateral symmetric patchy and confluent white matter lesions in the centrum semiovale and periventricular region as well as in the brainstem compatible with ADEM.

Figure 1: EEG of patient

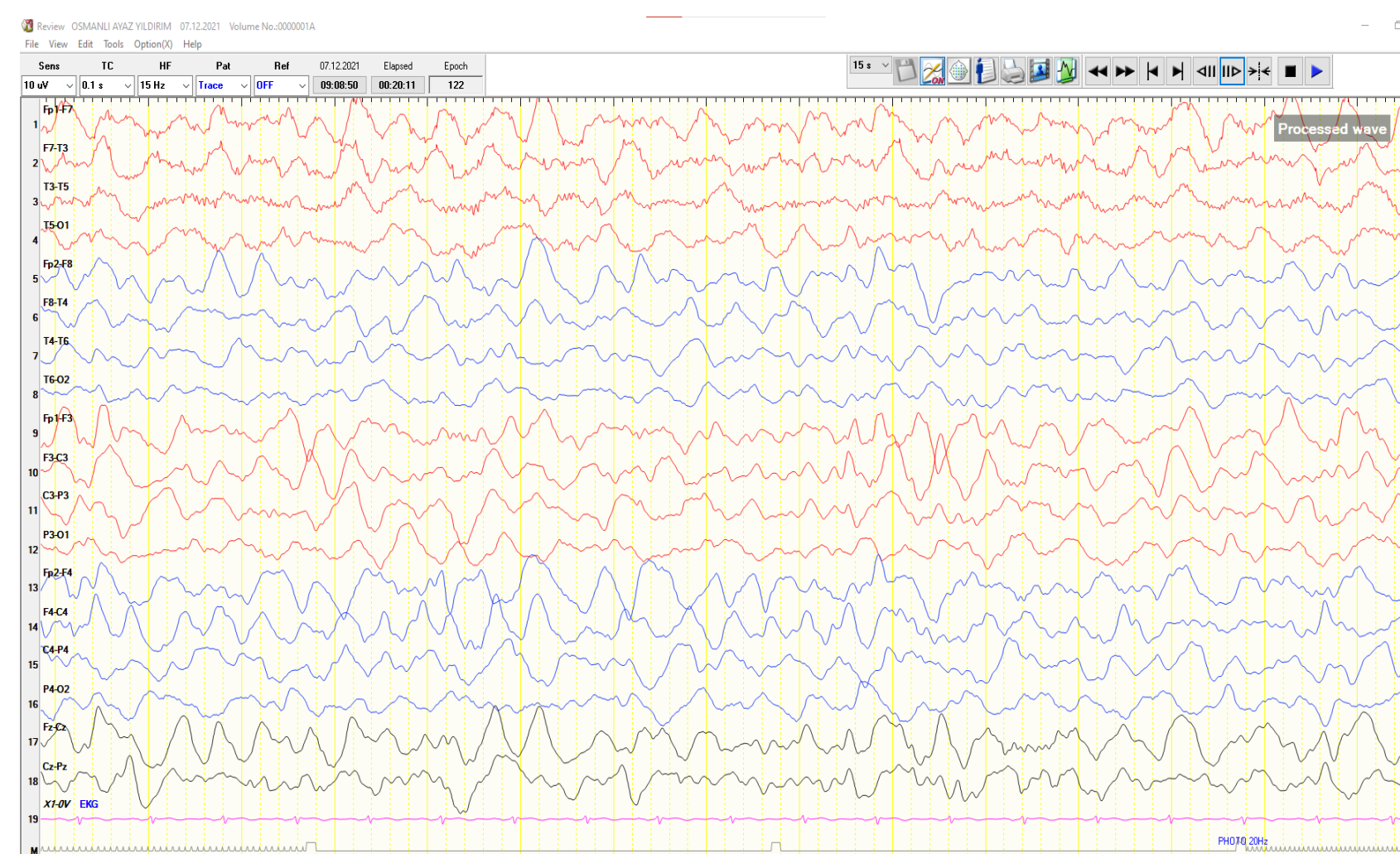
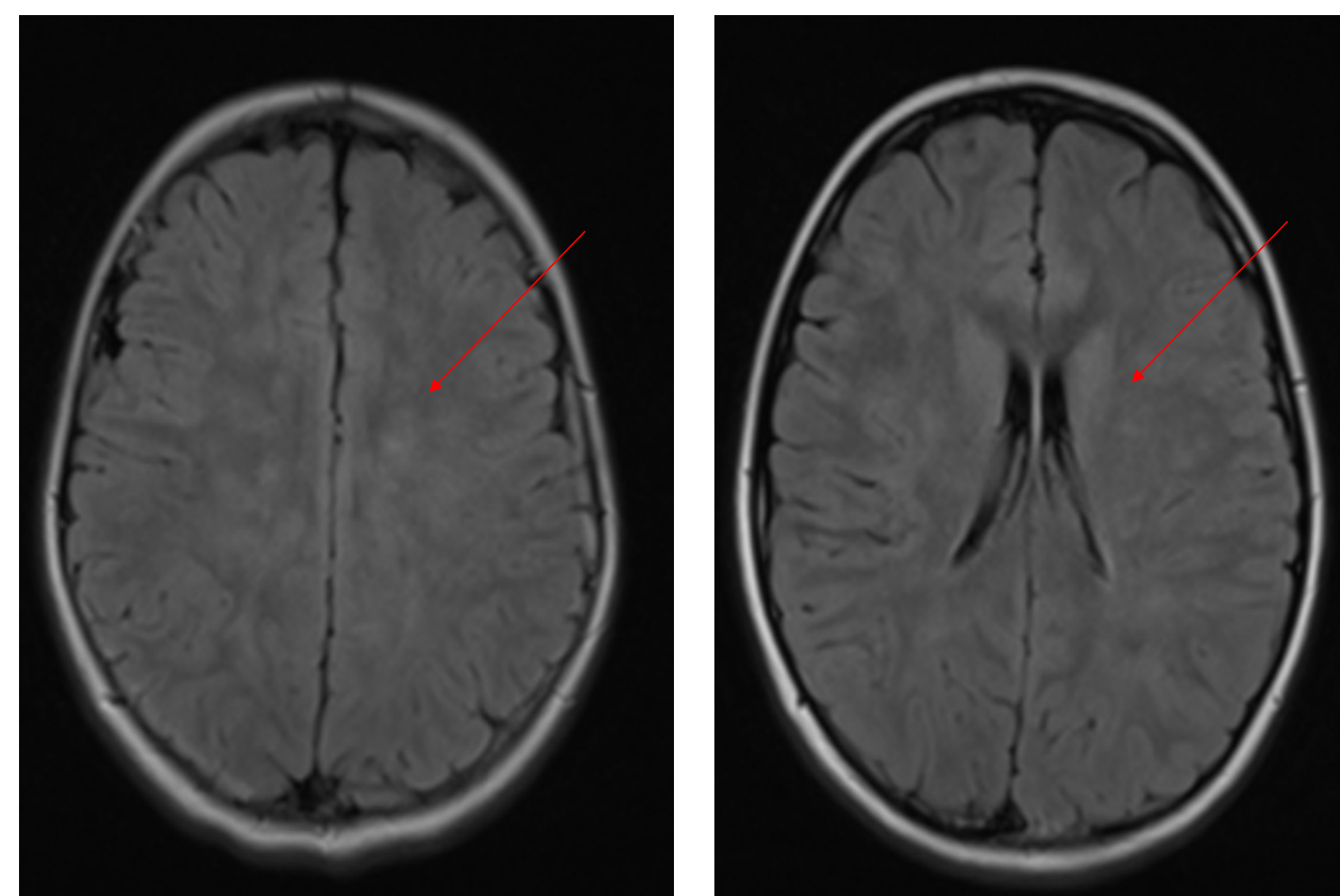
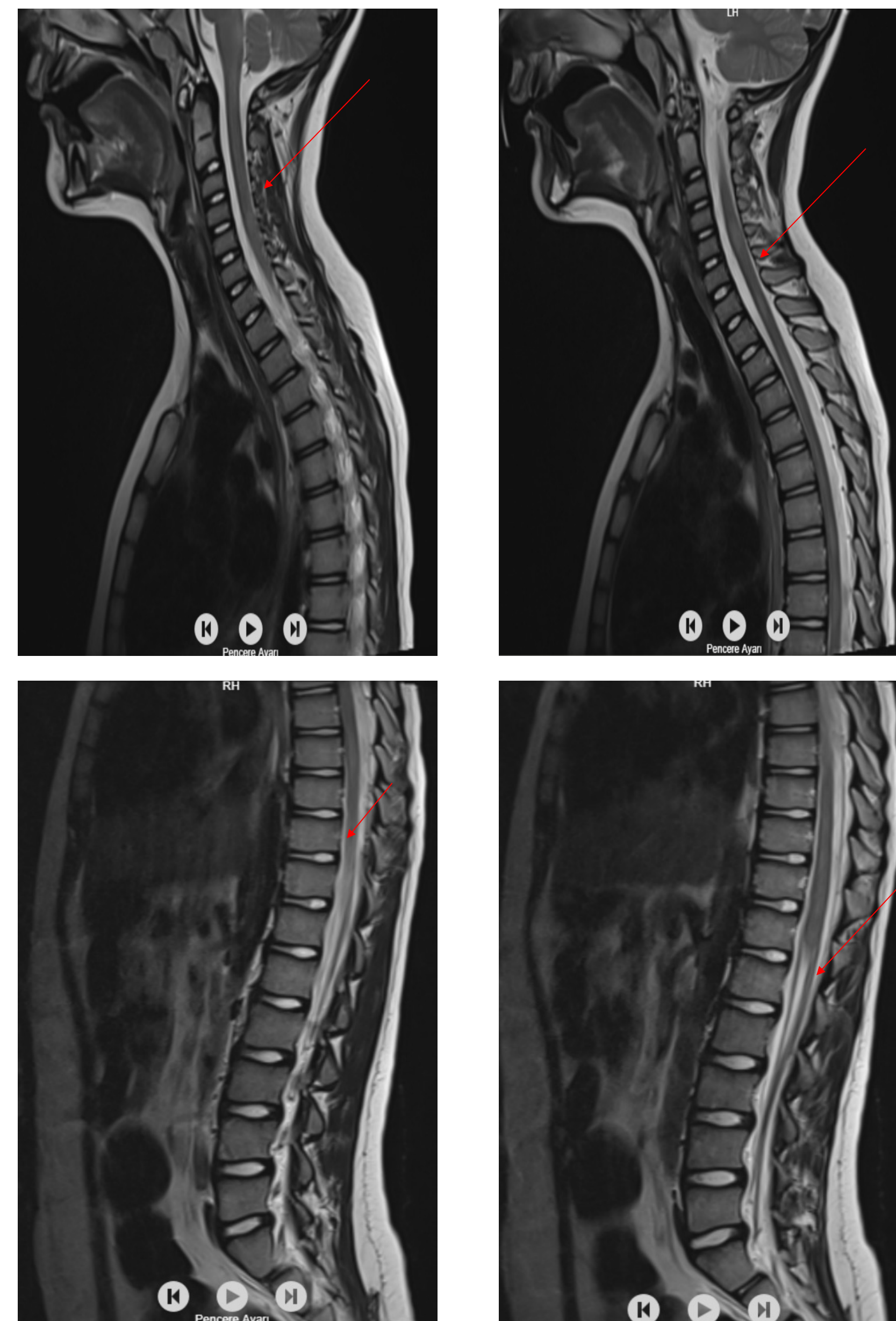


Figure 2: Brain MRI of patient



The whole spinal MRI showed multiple patchy expansile T2 hyperintense intramedullary lesions extending longitudinally suggestive of acute longitudinal extensive transverse myelitis.

Figure 3: Spinal MRI of patient



His nasopharyngeal swap determined an acute adenovirus infection. We treated him with 1 g/kg/day IVIg for two days, and 30 mg/kg/day IV methylprednisolone for 5 days and 1 mg/kg/day tapered over 3 weeks.

After this treatment, his symptoms worsened, total plasma exchange (PLEX) was performed on third day. On his new brain MRI and lesions were extended. We gave him rituximab once a week, totally 4 doses. On new brain and spinal MRI all lesions regressed and he recovered without any sequelae.

## CONCLUSION

The pathophysiology of acute and postacute neurologic manifestations of COVID-19 is multifactorial. Treatments are corticosteroids, immunoglobulins and PLEX. Also it's important that rituximab must be considered as a treatment option in very severe cases like our patient. COVID-19 related demyelinating diseases are rare and life-threatening situations. Early diagnosis and appropriate treatment is critical for life saving.

## REFERENCES

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