



# Atypical facial nerve palsy in a patient with COVID-19 infection

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## CASE PRESENTATION

### History of present illness:

49-year-old male with left sided Bell's Palsy after COVID-19 infection.

### Background:

- 49-year-old male with presented with left sided facial weakness and inability to close his left eyelid.
- He endorsed left posterior auricular swelling, ear fullness and fever 7 days prior to the facial weakness which was treated conservatively, and the swelling resolved spontaneously.
- He did not endorse any tick bite or trauma.

### Past Medical History:

Diabetes mellitus, hypertension, Recent COVID-19 infection (March 2020).

### Physical exam:

- Severe dysfunction based on House-Brackmann classification with barely noticeable muscle movement, facial asymmetry at rest, incomplete eye closure, asymmetric lip angle with intact taste, hearing, and sensation.
- No vesicles were noted in the external ear.

### Plan:

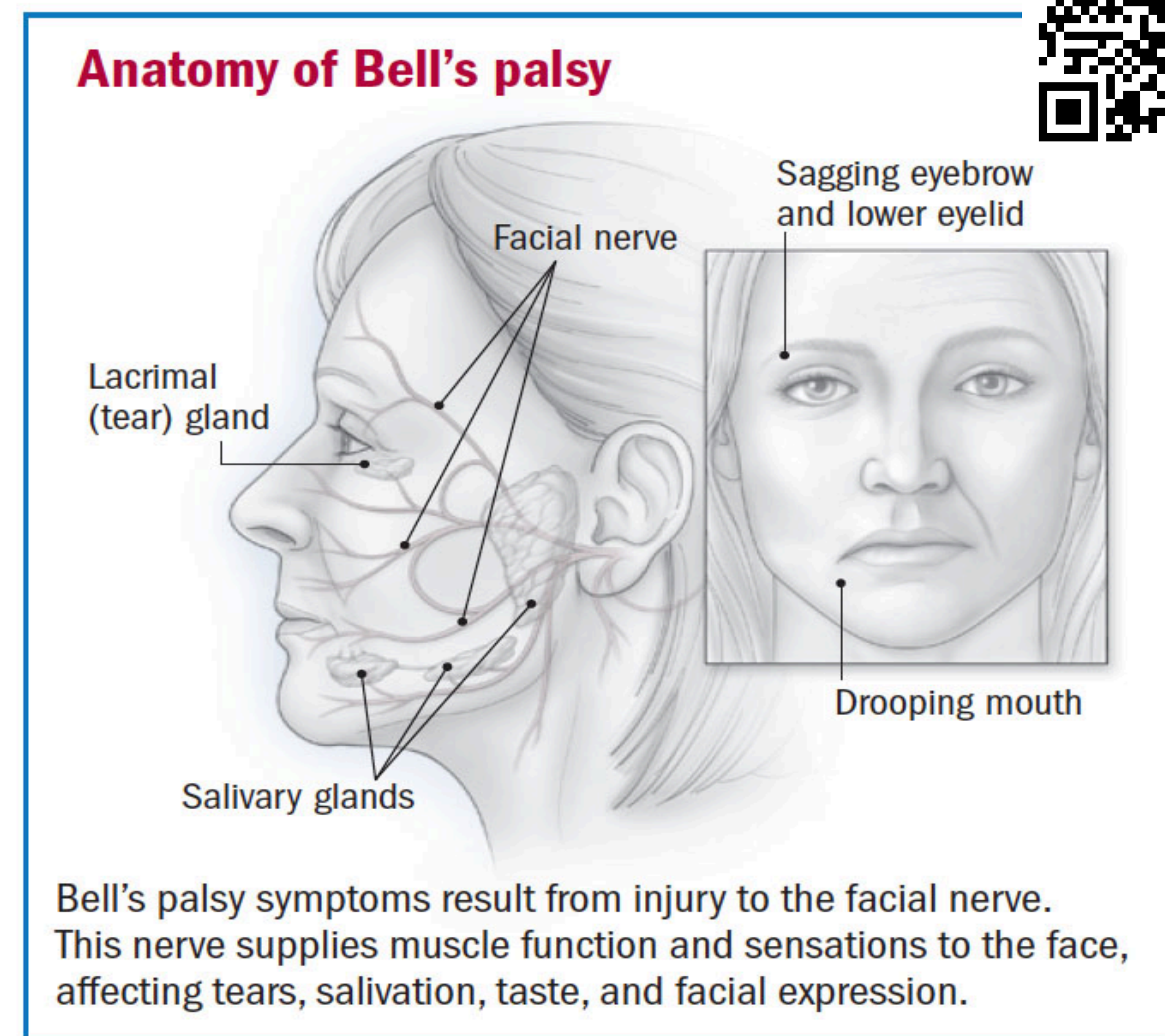
- He was started on prednisone 60 mg and Acyclovir for a week.
- He was prescribed physical therapy sessions to provide facial muscle exercises, massaging and electrical stimulation as needed for recovery.

## LABS AND IMAGING

**Blood work:** positive for COVID antibodies in July 2020.

### Figure 1. Anatomy of Bell's Palsy

(Source: Harvard Health Publishing, Bell's Palsy Overview)



## DISCUSSION

More than one-third of all COVID patients present with neurological manifestations especially patients with severe infection (1,2,3,4,5). Most common symptoms being anosmia and ageusia. Cases of Guillain-Barre Syndrome have also been reported (6). Few cases of cranial nerve involvement with COVID-19 have also been reported, and the association as well as the disease mechanism of COVID-19 on peripheral nerves is not well known.

## DISCUSSION

Axonal spread and viral replication are thought to be the mechanism behind Bell's palsy. The patient has an intact sense of smell and taste, which contrasts COVID-19 patients reported to have cranial nerve involvement (dysphagia, facial paralysis, diplopia) who had concomitant anosmia/ageusia symptoms. The prognosis has no significant difference between diabetic and non-diabetic patients (7).

## CONCLUSIONS

Cranial nerve involvement, including facial nerve, could potentially be associated with COVID-19 infection. Early diagnosis ensures better prognosis.

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