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SALIVARY IMMUNOGLOBULIN 'A' IN PEPTIC ULCER PATIENTS

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IMMUNOGLOBULIN A (IgA), which represents a relatively small fraction of the serum immunoglobulins, is the predominant species in most external secretions; i.e, secretions that bathe mucous membranes having continuity with the external environment. In man, secretory IgA and polymeric IgA come from the mucosal sites, especially the gut. In healthy adults, 80-90% of intestinal immunocytes produce IgA, and their levels tend to rise in patients with a variety of mucosal inflammation diseases¹. We do not know much about their levels in peptic ulcer patients. In this study, the levels of IgA in saliva of peptic ulcer patients have been measured to find if they differ from those in normal persons.

Saliva was collected from patients and control subjects and centrifuged to remove particulate matter. The supernatant was used for IgA determination by the single radial diffusion technique². The required monospecific antiserum was mixed with agar before overlaying it on the slides and the test solutions (10 μ l) are put in wells cut in the gel. Standard samples of varying concentrations are also put in wells on each test plate and the plates are incubated for 18 hr at room temperature. Depending on the concentration, immunoglobulins in the test diffuse out to form precipitation rings around the wells. The diameter of the rings is proportional

Table 1. Salivary IgA levels in peptic ulcer patients and controls

Sample	No.	IgA (mg/dl)		Inter-pretation
		$\bar{X} \pm SD$		
Controls	24	6.93 \pm 1.55		
Duodenal ulcer	40	6.95 \pm 2.33	0.029	$P < 0.05$
Gastric ulcer	19	11.55 \pm 3.95	5.030	$P < 0.01$

to the immunoglobulin concentration in the saliva.

Levels of IgA in the saliva of 24 controls, 40 duodenal ulcer and 19 gastric ulcer patients have been determined. Results are shown in table 1.

Duodenal ulcer patients have levels similar to those of controls, while gastric ulcer patients have levels nearly 1½ times greater than that in controls. It was also found that all gastric ulcer patients with levels above the normal range ($\bar{X} \pm 2SD$ of controls) had associated gastritis, whereas gastritis was seen in only one patient with IgA level in the normal range.

In the external secretions, IgA serves to protect against infection and limits access of antigens to the general circulation³. The gut is the major source of IgA in the body and immunoglobulin-deficient patients have been found to have an increased prevalence of gastric disorders⁴.

One of the theories put forward for the decreased resistance of the gastrointestinal mucosa to acid-pepsin action is that hematogenous infection with organisms of low grade virulence may cause inflammatory foci in the stomach wall leading to necrosis with subsequent digestion and ulcer formation⁵. Many workers are of the view that chronic ulcer does not develop in a healthy mucosa and that gastritis precedes development of an ulcer. There is general agreement that local immunoglobulin formation is important for the maintenance of a normal intestinal mucosa.

Results have shown a significant increase in the IgA levels in saliva of patients with gastric ulcer compared to those in controls and duodenal ulcer patients. Since it is known that gastric ulcer is often associated with gastritis and an inflammatory change, we could suppose that under such conditions, the gut is stimulated to produce more IgA. It is not yet clear whether this causes other mucosal membranes also to secrete an excess of IgA. But such a significant difference as has been found clearly indicates that measurement of salivary IgA helps in the differential diagnosis of gastric ulcer associated with gastritis.

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BRUGUIERA CYLINDRICA (L.) BL.
(RHIZOPHORACEAE)— A NEW LOCALITY
RECORD FROM THE WEST COAST OF INDIA

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BRUGUIERA CYLINDRICA (L.) Bl., one of the mangrove plants and a member of the family Rhizophoraceae, has not been reported from Goa coast so far. This note therefore forms the first record on this taxon from this region, along the west coast of India.

In one of the recent surveys, the morphological variation in floral structures observed in the species of *Bruguiera* generated a lot of interest and led us to take up a detailed taxonomic observations of all the taxa of this genera. All the four species of this genera viz. *Bruguiera parviflora*, *B. sexangula*, *B. cylindrica* and *B. gymnorhiza* reported from India and described recently as tree forms¹, focussed the attention of the authors on the locally collected (from Ribander, along Mandovi estuary) lushy shrub/small tree. This was initially assigned to the genus *Bruguiera* based on key characters and on further observations confirmed to be *B. cylindrica* (L.) Bl. (figure 1).

Cooke² and Blatter³ have enlisted *B. caryophylloides* (= *B. cylindrica*) as a rare species along southern presidency of Bombay. It is however, observed that there is no mention of this species from west coast of India in recent literature^{4,5,6} while, it is reported to be common on the east coast of India⁴.

The occurrence of *B. cylindrica* along the Goa coast, therefore, forms an interesting finding from phytogeographic distribution point of view and its autecology might throw some light on possible causes of its rarity.

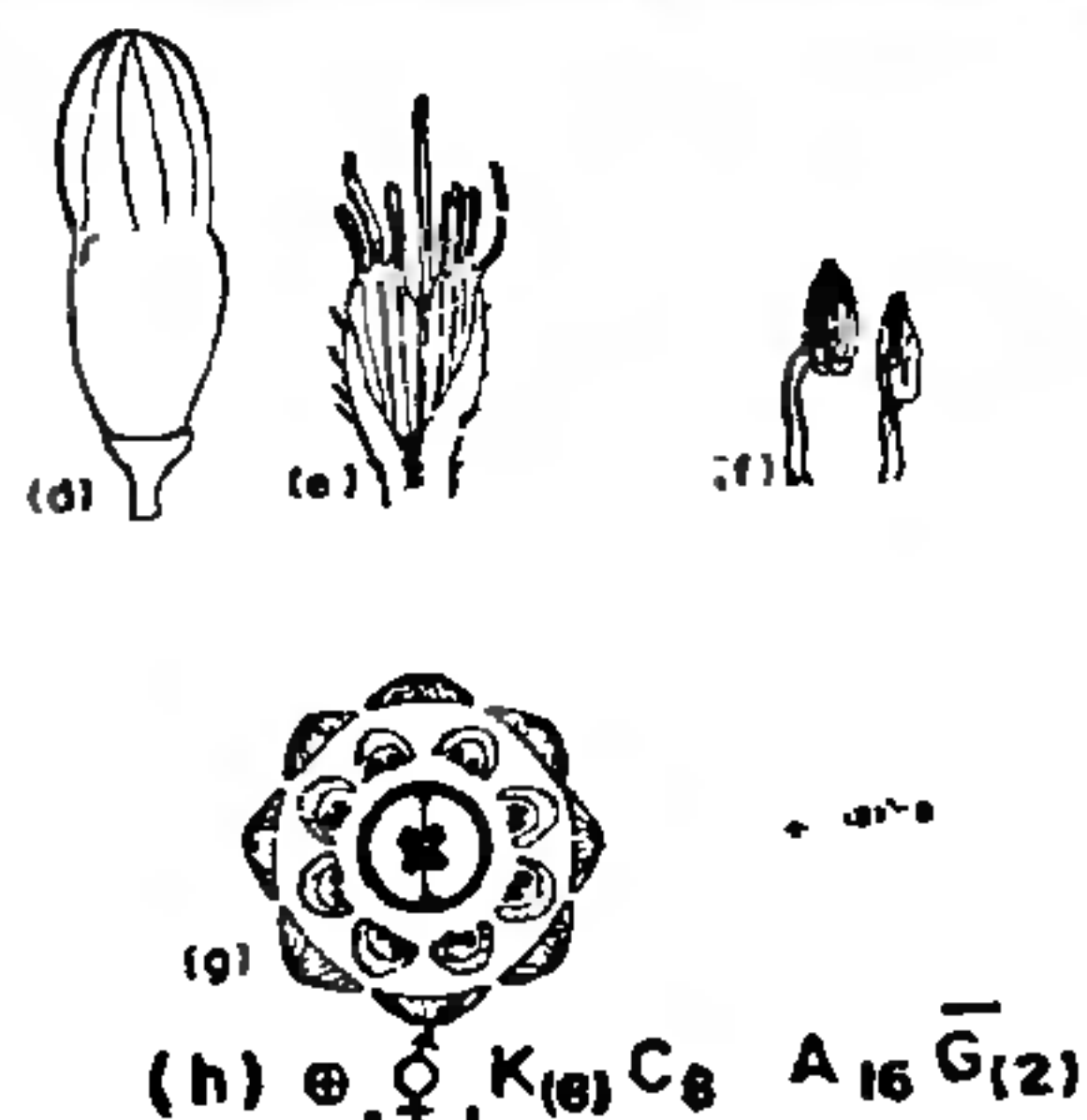


Figure 1. *Bruguiera cylindrica* (L.) Bl. a. portion of a shoot with seedlings, b. mature detached seedling, c. portion of shoot showing insertion of inflorescences, d. single flower showing smooth calyx tube, e. single petal showing apical and sinus bristles, f. a pair of stamens with unequal filaments, g and h. floral diagram and floral formula of *B. cylindrica*.

Key to the *Bruguiera* Species
(after Ding Hou, Fl. Thailand 2(1); 8, 1970)

1. Flowers solitary, 3–4 cm long:
 - i. Petal lobes acute (not reflexed); each with (1–) 2–4 apical cilia usually distinctly exceeding lobe apices. Mature calyx red to pinkish-red, ribbed only at the upper part of the tube.. 1. *B. gymnorhiza*
 - ii. Petal lobes obtuse (reflexed); each with 0 or 1–2 (–3) apical cilia usually not or hardly exceeding lobe apices. Mature calyx yellow (often with