The stomach is a gastrointestinal organ that is responsible for preliminary digestion and destroying any potential pathogens. It is in the stomach that the production of gastric acid, the regulation of this production, and some clinical conditions that result from this process are discussed.

The first step in the assessment of an acid–base disorder is a careful clinical evaluation. Various signs and symptoms often provide clues regarding the underlying acid–base disorder; these signs and symptoms may include, but are not limited to, the following:

- Changes in mental status or level of consciousness
- Changes in respiratory rate and pattern
- Changes in heart rate and rhythm
- Changes in skin turgor and moisture
- Changes in urinary output

If these signs and symptoms are observed, the clinician should consider the possibility of an acid–base disorder and proceed with further evaluation.

The clinician should also consider the patient’s medical history, including any identifying factors such as recent surgery, trauma, or infection, as well as any medications the patient is taking. Additionally, the clinician should consider the patient’s environmental conditions and physical activity levels, as these factors can also contribute to acid–base imbalances.

In conclusion, the assessment of an acid–base disorder is an essential part of the evaluation of the critically ill patient. A thorough understanding of the pathophysiology of acid–base balance and the clinical manifestations of acid–base disturbances is crucial for the management of these disorders.