

*August 31st.*—Condition slightly improved ; left the hospital yesterday.

#### CHEYNE-STOKES RESPIRATION.

N. C., an old French-Canadian, aged 70, was admitted June 22nd, 1889, under Dr. Stewart, and came under my care on the 27th July. On admission the patient complained of very great dyspnoea, of choking sensations, and a sense of weight in the chest. His health was excellent up to about three weeks ago, when, while engaged in cutting grass, he suddenly felt a sharp pain in the chest, and began at once to experience a choking sensation, symptoms from which he has suffered more or less ever since. He is a shrivelled up, little, old man. Expression very anxious and indicative of great suffering. The eyes are watery, and there is unusual redness of the conjunctiva. The pupils are contracted and react to light and accommodation. The skin is universally dry and scaly. The nails are curved, the finger-ends clubbed and rather blue.

The remarkable feature of the case is the rhythm of the respiratory acts, which is distinctly of the Cheyne-Stokes character. For thirty seconds all movements cease, then they become gradually deeper and more frequent, the head is thrown back, and the respiratory muscles are brought into play. Then by degrees the respirations become less deep, until they finally cease, to begin again. The interval from one pause to another is about one and a half minutes. The area of the heart's dulness is normal in extent, the impulse feeble, and apex beat not perceptible. No murmurs. The sounds are feeble. Pulse 78 ; irregular in volume and rhythm, every fourth or fifth beat being omitted. The arteries are tortuous and hard. Urine is of a pale color, acid reaction ; specific gravity 1022 ; albumen present in small quantity, no sugar ; passes  $7\frac{1}{2}$  grains of urea to the ounce ; granular and hyaline casts are present ; total quantity of urine daily, 28 ounces.

Shortly after admission the albumen and casts disappeared and the specific gravity became reduced to 1012. Five days after admission it was noticed that the Cheyne-Stokes breathing was no longer present. It was again noticed on one or two