

Original article

# Clinical Research of Intensive Care Unit Acquired Weakness

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**ABSTRACT**

**Objective:**

(ICUAW). **Methods:**

died. **Conclusion:**

**Key Words:**

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**INTRODUCTION**

(ICUAW)

patients' mechanical ventilation, ICU time and prognosis . It is classified into three types according to the site of lesions, critical illness myopathy (CIM), critical illness polyneuropathy, . The . Combined

and clinical characteristics of ICUAW.

**MATERIALS AND METHODS**

General information: Data of 20 cases (October 2011 to October 2014) from intensive care unit of Qilu hospital, Shandong

lactate dehydrogenase, myoglobin level, mechanical ventilation time, ICU length of hospital stay, and the total length of hospital stay. We also observed the muscle biopsy and ultrastructural

prognosis of patients.

We used the open muscle biopsy for the uninjured side biceps

eosin (HE), improved Gomori three color (MGT) and reduced

described in this article.

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immunohistochemical staining is done by resistance Dystrophin

alpha sarcoglycan, beta sarcoglycan, gamma sarcoglycan, delta

electron microscope.

electromyography, and four limbs sensory and motor nerve

## DISCUSSION

importance in China

strength and electromyography. Critically ill patients have a certain degree of disturbance of consciousness, and muscle strength can be affected by the interference of sedative drugs, and subjective factors

muscle strength. Muscle biopsy is the gold standard in the

from rare myopathy causes

## RESULTS

, leading

Due to breathing difficulties, and invasive mechanical

.This study also observed

mitochondria almost disappeared. Study reported that in severe

one case of glycogen storage disease type II , one case of adult

due to factors such as mitochondrial

for increased muscle damage .As above mentioned factors

cause of carpal tunnel syndrome electromyography changes.

ICU nurses in compare to beds, treatment of dysphoria of severe

off the tube happened at times , and the physical constraints are universally adopted. We should pay proper attention to this phenomenon

CIM had muscle damage changes on electromyography. 4 cases of

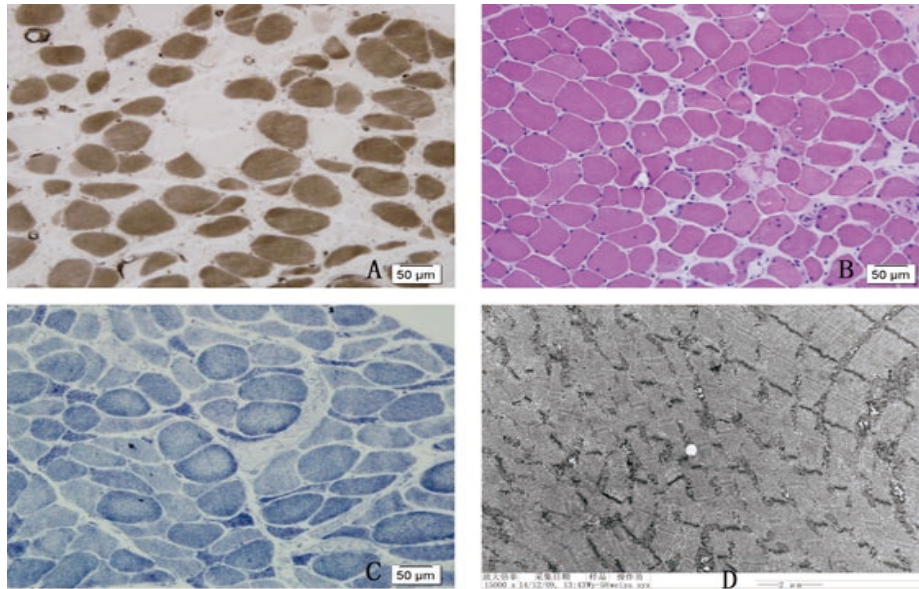


Fig.1 Musculus biceps brachii myopathy physical change in ICUAW patients

- 1A. muscle fiber sizes differ significantly , most small fiber are elongated , no muscle necrosis and regeneration of muscle fibers and inflammatory cell infiltration (ATP 4.6×200);
- 1B. muscle fiber sizes differ , occasionally muscle necrosis and regeneration of muscle fibers , and no inflammatory cells infiltration (HE×200);
- 1C. myofibrillar disarray , some were like insect bite (NADH-TR×200);
- 1D. Myofibril significant disordered , structure of sarcomere is damaged , destructed, and mitochondria is almost invisible (×15000).

protein , merger cases, such as diabetes peripheral neuropathy lead to clinical misdiagnosis. Domestic intravenous ganglion glucoside ester preparation treatment often merge neuropathy in

muscle damage; A single muscle tissue biopsy site missing serious injury; Muscle biopsies after long onset of time; and necrotic

. Such is the case in this study, patients have a history of such drugs infusion. Alarming sepsis caused diaphragmatic muscle damage, short time of mechanical ventilation induce fast

to identify types of ICUAW is also used to evaluate patients degree of muscle recovery

instrument operation, strong professionalism, limb edema, ICU machine noise, interference electromyography information

**CONCLUSION**

.Due to above information 4

Table 1 Clinical data, inspection results and the type of myopathy of 20 cases of muscle biopsies

Serial	Age	consciousness	CHEII	Changes of the enzymes	ICU (day)	ICU (day)	(day) nosis	Cerebro spinal	morbidity time	gical changes	EMG	Clinical diagnosis
1		Severe acute pancreatitis,		10			Death			myopathy		CIM
2		MODS		22			Alive		14	myopathy		CIM
	M	respiratory	Coma				Alive			myopathy		CIM
4	M	encephalopathy Cerebral hemorrhage after surgery, the symptoms of epilepsy					Death			myopathy		CIM
	M	surgery			41		Alive			myopathy	EMG	CIM
	M	Morbid obesity DM, chronic renal		21	14		Alive			myopathy	Myogenic damage	CIM
	M	respiratory failure Cerebral hemorrhage, hydrocephalus, pulmonary infection, respiratory failure	Coma	20		unmeasured	Alive			myopathy	Myogenic damage	CIM
	M	cerebral hemorrhage respiratory failure	Coma	21		12	Alive		42	myopathy	Myogenic damage	CIM
	M	Severe pneumonia		21		11	Alive			myopathy	Myogenic damage	CIM
10		cardiopulmonary resuscitation pulmonary infection respiratory failure		14			Alive	cytology Mildly elevated protein		myopathy	Motor nerve generation	

Serial	Age	disease	consciousness	CHEII	Changes of the enzymes	ICU (day)	ICU (day)	ICU (day)	nosis	Cerebrospinal	morbidity time	gical changes	EMG	Clinical diagnosis
11	M	Cerebral hemorrhage respiratory failure			11				Alive	brospinal		myopathy	Motor pathy	
12		infection respiratory failure				44			Death			myopathy	pheral nerve injury	
	M	Severe pneumonia		24	unmeasured				Alive			myopathy	Injury of radial nerve	
14		Japanese encephalitis pulmonary infection respiratory failure	Coma						Alive	Changes in viral	21	myopathy		CIM
	14	encephalitis status epilepticus Severe acute pancreatitis	Coma			14			Alive	Mild cytotoxic reaction	42	myopathy		CIM
	M	pancreatitis abdominal infection							Death		10	myopathy		CIM
	M	contusion	Coma	24			12		Alive		10	myopathy		CIM
		Internal auditory artery occlusion Muscle			10				Alive	cytology Mildly elevated protein		normal muscle tissue	pheral nerve injury	Acute febrile neuritis
	24	respiratory failure Ischemic							Alive			Glycogen storage disease type 2		Glycogen storage disease type 2
20	M	respiratory failure		12	4 unmeasured				Alive		20	myopathy		Adult myopathy

polyneuromyopathy

**REFERENCES**

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