



VANTAGE

Administration Method of Culture Supernatant

Regarding the use of the culture supernatant, the administration method can be changed depending on the purpose and expected effect.

Here, we will introduce the administration method of the culture supernatant, as well as the effects and expected effects on tissues and organs.

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Intravenous drip treatment

If the effect of systemic administration is expected, the culture supernatant should be administered by intravenous drip.

Usually, the culture supernatant is dissolved in a certain amount of physiological saline and administered slowly throughout the body.

In the case of systemic administration, the following effects can be expected depending on the site of action.

Somatic cell differentiation promoting action in the body (induction of self-renewal ability, etc.)

The combined action of cytokines contained in the culture supernatant enhances the ability of cells throughout the body to regenerate in every sense.

This self-renewal ability can be expected to have various effects depending on the part where the ability is enhanced.

- * Revascularization / angiogenesis (improvement / prevention of progression of atherosclerotic lesions, revascularization medicine, etc.)
- * Tissue repair action (improvement of liver damage, liver cirrhosis / fulminant hepatitis / chronic hepatitis, skin disease / atopic dermatitis)

Immunomodulatory effect

The supernatant also contains cytokines that act on immunity, and immune regulators also help avoid excessive immune responses.

- * Various allergic diseases and autoimmune diseases
- * Inflammatory bowel disease, rheumatoid arthritis



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Nerve cell repair / regeneration action

BDNF (brain-derived neurotrophic factor), HGF, β -NGF (nerve growth factor), TGF- β 1, etc. are involved, and by promoting nerve cell repair and nerve regeneration, the effect of recovering central nerve (brain / spinal nerve) function can be expected.

- * Promotion of rehabilitation effect after cerebral infarction
- * Prevention of dementia progression and activation of brain function
- * Improvement of neuropathy associated with spinal cord injury due to traffic accidents and trauma
- * Alzheimer's disease
- * Hypoxic ischemic encephalopathy / Parkinson's disease
- * Peripheral neuropathy / multiple sclerosis

Bone regeneration

Currently, efforts are being made to regenerate bone using the culture supernatant.

As a merit of administration of supernatant, bone regeneration is promoted without stem cell transplantation, so it is expected that not only the treatment is safe but also many problems associated with cell transplantation will be solved.

- * Osteoporosis / pulpitis / gingival inflammation

Scavenger action (removal of active oxygen)

It has long been pointed out that the effects of active oxygen are greatly involved in the aging of the human body and the onset and progression of diseases.

In addition, many effects related to active oxygen removal have been proven, such as the use of free radical scavengers as one of the treatment methods for the acute phase of cerebral infarction.

Since the culture supernatant can be expected to have various effects by removing active oxygen, it can be said to be effective for chronic disease prevention and anti-aging.

- * Preventing the progression of diabetes and improving complications
- * Prevention of lifestyle-related diseases and improvement of atherosclerotic lesions due to angiogenic effects
- * Reduction of cytotoxicity associated with high-intensity training

Topical administration of culture supernatant

In the case of topical administration, high-concentration cytokines are more likely to exert their effects by locally administering to the site where the effect is to be felt more and the site where the damage is severe.

It can be said to be an effective method when you want to feel the effect locally or when you want to regenerate and recover the locally damaged part at an early stage.



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Local injection treatment

If you want to feel the effect of the culture supernatant locally, topical administration is performed. In this case, intradermal / subcutaneous injection, intra-articular injection, or direct administration to the target tissue can be said to be common.

Anti-inflammatory effect

Promotion of recovery by administration (undiluted solution) to nerve and tissue damage sites
Promotes healing of inflamed areas and reduces pain
Inflammation reduction and injury site (cartilage, etc.) regeneration by intra-articular administration.

Beauty effect

- * Skin beauty regeneration (improvement of turnover, promotion of repair of scratches, etc.)
- * Improvement of wrinkles and sagging
- * Improvement of skin elasticity and subcutaneous tissue

Hair growth / growth action

Improvement of male and female thin hair
Adolescent hair loss (AGA) treatment

Local injection treatment of culture supernatant

Among the local administration methods, being able to apply without using medical materials (injection, local needle, etc.) is considered to be highly convenient because the patient can take care of himself / herself. In order to maximize the stability and effectiveness of the supernatant, it is recommended to avoid long-term storage as much as possible, and to thoroughly implement an appropriate storage method and use it early.

1. Beauty action (skin beauty regeneration)
2. Hair growth / growth action
3. Early recovery of wound / tissue damage site

