

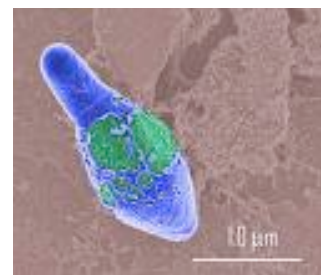
Botulinum Toxin in the aesthetic treatment

Clostridium Botulinum is the microorganism responsible for the production of botulinum toxin. It is able to produce very resistant spore. Extreme conditions as boiling, salting or smoking do not change the survival!

Jams and marmalades are famous because it is in there that the clostridium botulinum lives and produces big quantities of toxin, dangerous for who is going to taste it!

You can easily find spores even in humid atmosphere as soil and stagnant non drinking water (even sea water) and can contaminate some foods that are kept in cans, uncooked, or cold meats or hams.

The disease that comes from it is the Botulism, obviously alimentary, which provokes death, basically for respiratory paralysis.



What is the Botulinum Toxin and how does it take effect?

The botulinum toxin has a great impact on the muscular movement. In fact, it penetrates in the muscles and in the neuromuscular plate avoiding the release of acetylcholine and neuromuscular transmission. By now researchers of the sector have been able to transform this very dangerous active principle in a very used medicine for many indications and it has been very used even in the aesthetic field.



In Italy the product with aesthetic indications is called Vistabex. Botox is the same product but for the oculist and neurological use.

In Italy Vistabex has been approved for the aesthetic use in 2004 and this is valid only for the glabella. This means that on the illustrative paper inside, it is recommended for the reduction of the glabellas' wrinkles.

In all of the other body districts, it is used "off label", as for the 40% of the medicines used in Italy.

So in conclusion, the toxin takes effect relaxing the muscle that provokes the wrinkles, and we are obviously talking about the mimic wrinkles. In particular the one of the upper third of face.

More and more, we are obtaining great results also in other districts as the third inferior of face, neck and décolleté.

Can the Botulinum Toxin be dangerous for my health?

Effects of systemic poisoning due to the toxin are not referred. The quantity used in cosmetics is very low compared to dangerous doses.

Different if the toxin can give unwanted effects: if it is injected in muscles, different from the target, the toxin does not make any mistakes and it provokes the wanted muscular weakening. But, as I always say, the botulinum toxin is never wrong: it does its job! It has been injected in the majority of case in much exaggerated ways or in dangerous or wrong injective spots!

However, today, there are not defined cases of injures of botulinum.

Is the toxin ready for the use or do I need to prepare it at the moment?

The toxin is lyophilized and it is prepared at the moment of the infiltration. This is the first important step to reduce the collateral effects. In fact, if it is too diluted, the same quantity of toxin will be diluted in too much water and infiltrations in other districts will be possible.

On the contrary if it is not enough diluted, the effect will be very limited in the extension and short in the time. The ability of the doctor who uses the botulinum toxin is to be able to adapt this detail to specific patient.

How is the toxin injected?

It is injected through syringes for insulin. Even this will be a very important moment because different syringes allow different precision of implant. I personally use syringes of 50 U (syringe of insulin of 0,3 ml for diabetes).

Is the depth of the injection important?

Absolutely yes! It is fundamental that the muscle is injected precisely; deeper muscle will need deep injections, superficial muscles will need superficial injections. And when deep and superficial muscles co-exist, the precision of the implant is important!



Is it important to study the patient?

This is another important aspect to avoid the rising of collateral effects and to have important results. The patient needs to be studied very well with a marker to determine exactly where to inject before poking him/her. Every patient is different from one another and the injection has to be studied precisely.

For what indications can we use the Botulinum Toxin?

Only in the aesthetical field, for wrinkles!

The toxin has a great effect on wrinkles, as we all know. In these past few years, the increase of the use of Vistabex has been very exponential, in few years even more than the 1000%. The main indication remains the wrinkles of the third superior of face. The glabella wrinkles, basically the one between the eyes, are the indications that the Minister of Health believed they could be authorized in the illustrative paper. But surely even the wrinkles of the forehead and the lateral side of the eye derive advantages from the injection of the Toxin. Also the third inferior of face is treated more. In fact one of the most important actions remains the modulation of the balance between agonist

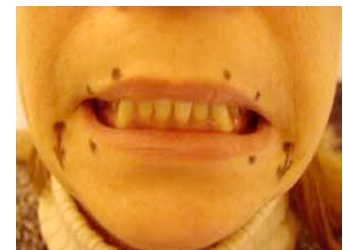


and antagonist muscles. And this is the most important mechanism of action in the modulation of the release of the mandibular edge and in the treatment of the so-called platysma bands.

In the end, the botulinum toxin is very used by some authors in the treatment of wrinkles of décolleté.

In fact, muscular myofibrils, which go from the deep muscle to the skin, are documented.

With few units of toxin diluted in revitalizing substances, it is possible to reduce this phenomenon and obtain great results even in this district.



For perspiration

The toxin has a very extraordinary effect in the limitation, and sometime even the abolition, of exaggerated sweating. This effect is visible to all people who tried the toxin on the forehead for aesthetic reason: for several months the sweating on the forehead will not exist.

In the treatment of the axillary dysidrosis, hands and feet, the results are great, without any collateral effects. Beside, the injections, especially under the arms, are not painful, and the effects are natural.

If the session is done at the beginning of the summertime, the results will be great, being the winter less exposed to the problem!

This is one of the field where the toxin represents a truly Copernicus revolution!

Is the toxin eternal or it has to be done after a while?

The toxin needs to be done every six months. There are not collateral effects described today after injecting it. Then, after few months, the aesthetic effect resets. It is obvious that even the collateral effects will not last forever, and with the time they will go away and totally disappear.

I personally never inject the toxin before 4 months from the previous injection.

In fact, repeating the injection too frequently can expose to the risk of sensitization and production of antibodies, which could inactivate the toxin.

Can the botulinum toxin be done with other treatment?

In my opinion the toxin is better if it is done alone, this means in a session all by itself.

This is for two reasons:

- there are already many injections, and the toxin can not be done at the same time where you have other treatments.
- I mean that in the same session we cannot do the toxin on the glabella wrinkles and another filler as the hyaluronic acid.
- We could inject the toxin in the third superior of face and a filler for the nasogenian wrinkles. But...
- ...many wrinkles of face, after the botulinum toxin improve a lot and the quantity of corrections needed with other techniques decreases proportionally.

For example, the nasogenian wrinkles, after a treatment of botulinum toxin of the mandibular edge, can improve a lot.

For these reasons I usually tend to inject the toxin in a different session, evaluating the results and end it with other corrections after having evaluated the obtained benefits.

In different sessions, instead, there are not any problems. The association with fillers as hyaluronic acid, revitalizations and peeling is basically the rule. It is interesting the association with fractioned laser.

I do not use non-reabsorbable materials as silicon, polyacrilammide or metylmethacrylicate, which in my opinion are more dangerous.

Which advice can we give after a session of Botulinum?

The patient can not go to the spas or take too hot showers.

Beside, even the physical activities have to be avoided.

Also facial massages are forbidden.

But basically you can have a normal life, and you can immediately go back to work.

When is it possible to go to the doctor and ask for a session of Botulinum Toxin?

The average age is from 30 to 65, but in my experience even older people respond to the toxin very well, and even in very selected cases, few defects of young ladies had great feedback without any risks.

As always good sense is needed!

Conclusions

I have always been a great supporter of the botulinum toxin, as many publications testify.

To subscribe: the administering by inexpert people. In fact, the toxin has to follow strict rules and a perfect knowledge of the anatomy, injective spots and the dilution is fundamental to have good results. So, the advice remains the one to ask to expert doctors with a great experience. As I always tell my patients, the major cost of the session is due to the experience of the doctor!

I would say to avoid "do it yourself" injections, they are very dangerous. Also to avoid the research of exaggerated results: often the vision of collateral effects that we sometime see also on TV is due to the research of impossible aesthetic results.

Instead if it is done in the limits of caution, going for the "natural look", and the reduction of the movement instead of its abolishment, the botulinum toxin can represent a very powerful weapon in the hands of the doctor.

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July 2007