MINI REVIEW ARTICLE
CREASES/LINES ON SKIN: DILEMMA AND COUNTER
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ABSTRACT
In youthful skin, the collagen support is intact and the skin remains moisturized and stretchy. It is flexible to numerous facial expressions that have been espoused, as well as on a daily basis atmospheric/environmental exposure. However, as the time passes the support and organization declines and the skin becomes unable to restore its elasticity. The skin commences to lose its attitude as the collagen support deteriorates. Whenever someone grin, frowns, or squint, it put strain on the collagen in the skin. The consequence of these facial expressions is collective and facial lines initiate to become visible. This review covers the advancements of injectable fillers for filling in wrinkles or creases in the face. To achieve the finest results in treating facial wrinkles or depressions, the suitable filler must be injected with a skill that suits best the individual indication. Fillers are classified as resorbable and non-resorbable stable fillers. With resorbable fillers only a provisional result can be obtained, that means the patient has to experience cyclical management. Whereas with non-resorbable fillers long-term fall out can be attained that may last for years and even decades. All fillers may have side effects like swelling, erythema, nodules subsequent to treatment and in very rare cases years after the injection odd body granulomas may produce that may be defiant to treat.

Keywords: Aging, wrinkles, depressions, creases, filler.

1. INTRODUCTION
This review article has been written while using various search engines such as PubMed, PubPsych, Questia, DermWeb, Multidisciplinary (Historical) Readers’ Guide to Periodical Literature Journals and Magazines, etc. The literature cited has been published during 2008-2016.

1.1. Dilemma
“This wrinkles either show that you are nasty, cranky and senile or that you are always smiling” – Carlos Santana.

A crinkle, also known as a line, is a fold, ridge or crease in the skin. The skin wrinkles usually emerge as a consequence of aging course such as glycation, routine sleeping point, loss of body mass, or interim as a result of prolonged immersion in water1,2. The wrinkling in the skin is endorsed by regular facial expressions, UV dent, smoking, poor hydration, and various other following factors3.

1.1.1. Aging and wrinkles
At the mid age, skin cells separate more gradually and the skin’s inner layer, dermis, commence to thin that ultimately leads to undo skins stretchiness or pliability and constitution. In addition, senility of skin establishes to lose its capability to grasp the moisture, makes a fall of oil production, and cause delay in repair leading to the initiation of the crumpling process4.

1.1.2. Facial muscle contractions
The furrows between eyebrows (frown lines) and wrinkles poking out from the angle of eyes (crow’s) are the symbols of facial muscle contractions. Smiling, grimacing, angular peeking of eyes and extra consistent facial style may build these wrinkles further prominent5.
1.1.3. Ultraviolet hurt
The excessive sun exposure can damage the skin and leads to the formation of wrinkles. The contact to UV radiation should be prevented between 10 am to 2 pm to avoid creasing the skin. The application of wide-ranging sunscreens, with a Sun Protecting Factor (SPF) of 30-70, everyday even in the winters is an important preventive measure to be protected from direct sun exposure. It is also recommended to wear full brimmed hat and to cover bare skin with outfits, for example, a long-sleeved shirt and pants.

1.1.4. Smoking and wrinkles
Smoking restrains skins generation of collagen that is a key part of the skin's organization. The decline in collagen gradually proceeds towards the occurrence of wrinkles.

2. TYPES OF REMEDIES
The dermal fillers have transfigured the field of aesthetic dermatology. With the aging of toddler boomers, dermal fillers have turn out to be a preferred innovation route to offer a youthful, three-dimensional appearance with meager recesses. The dermal fillers are gaining recognition by the media and the accessibility of an extensive selection of filler resources are now offered at prices more reasonable than before. The application of fillers for elastic tissue intensification with the synergistic use of botulinum toxin and a diversity of corresponding measures have become important sources for transformation. At present, the fillers accessible in Pakistan are of versatile features like divergence in resource, permanence, site of deposition, and price. The intentions behind this critique paper is to scrutinize the fillers offered in the promotion and to provide practical guidelines that would facilitate the dermatologist / cosmetologist to obtain the optimal outcomes for the patient. Wrinkle / crease / crinkle fillers can also be used as "volumizers" for plumping and revitalizing forehead / temples, cheeks / jaw-lines, filling out thin lips, and plummet dipped and sagging hands. The injectable wrinkle fillers can give a younger look for a little bit of what a conventional facelift expenditure. The wrinkles / lines and are filled in less than 30 minutes with outcome that can last from 4 months to more than a year. Injectable crease / wrinkle fillers, unlike botox injections that ease up the muscle tone under a problem area, fill the wrinkle, line, crease, or affected region with one of numerous diverse material. As an outcome, dilemma of early aging nearly disappears. The management is quick and simple but all wrinkle fillers have a disadvantage of creation of minute bumps beneath the skin together with the threat of allergic retort. In a few cases, those bumps may have enduring effects and sometimes, a bluish skin stain, known as the Tyndall effect, occurs. The shade can persist for quite a few months, but there are many remedies to recover. In very exceptional cases, skin cells may expire if the wrinkle fillers are not introduced appropriately. There have also been a few cases of loss of sight and nerve paralysis. Classically, the wrinkle fillers that stay in dermis for a longer time are the ones more expected to be the reason of side effects. Not each wrinkle-filler is accurate for every sort of wrinkle. The slightest risks and the finest outcome emerge from using the right one properly. That's why the fillers must be injected by a board-certified dermatologist or plastic surgeon with constant, extraordinary training.

2.1. What are the Remedial Opportunities for Wrinkles?
There are several over-the-counter remedies available for wrinkles, together with creams and lotions. Elimination of skin stratum is a helpful technique to rescue smoother, more youthful glaring skin. The other options may include:

**Dermabrasion** (abrading layers) and **Chemical peels** (dispersing epidermis) are two conventional techniques for improving the skin's surface. The laser skin resurfacing through an ablative laser (such as an erbium or CO2 laser) is a new technique that, like dermabrasion and deeper chemical peels, may necessitate some downtime for curing. Other lasers, identified as non-ablative lasers (like IPL), may also assist to care for wrinkles. These lasers work by warmth of the dermis and exciting collagen development. This course, which keeps the external
surface of skin integrated, has no downtime linked with it\textsuperscript{22}. Nevertheless, the consequences are not as striking as the ablative lasers that actually destroy the external layers of the skin. The botox injections reduce the capability of selective muscle movement, which alleviate the look of expression wrinkles around the and reduce wrinkles\textsuperscript{23}.

Fillers are injected into skin creases, more or less around the, to perk up the emergence of lines / wrinkles. Several fillers in fact excite collagen synthesis that recovers the skin quality and texture. Following are the common type of fillers:

2.1.1. Wrinkle fillers with hyaluronic acid
The most well accepted class of wrinkle fillers is hyaluronic acid. Every type exhibits effect to some extent diversely, with varying outcomes. The side effects are unusual but can embrace blush, puffiness, and staining at the injection site. The fillers may demonstrate under the skin as minute bumps which frequently gets better over time. The results are diverging from some months to more than a year or two. Some studies explore that frequent injections may help exciting the body’s own innate production of collagen\textsuperscript{24} that will assist to reduce the quantity of creases and wrinkles. There is also a few data available that a smaller amount of filler is needed over time to attain the identical look.

Hyaluronic acid is a chemical substance generally synthesized by the body that gives skin its volume and comprehensiveness. Hyaluronic acid injections load the gap between collagen and elastin fibers within the skin that restore the normal dermal volume that vanishes with time. There are no chances of infection but it requires frequent management to sustain the effect. Hyaluronic acid also exerts, drag and bind water that helps to sustain fullness where it is injected. Several hyaluronic acid resources are thicker and can adjoin major volume and organization\textsuperscript{25}. Others are smoother and thinner and have the capability to stream more constantly. Juvederm may last longer, upholding the looks for up to 12 to 18 months with minimal tissue damage and irritation\textsuperscript{26}.

2.1.2. Synthetic wrinkle fillers
This minor category of wrinkle fillers contain synthetic materials prepared in the laboratory and are not associated to anything found naturally in the skin. All the fillers in this collection have comparable side effects, such as erythema, puffiness, or staining at the spot of the injection. Other side effects include nodules formation beneath the skin that are obvious and palpable and that sometimes may necessitate surgical procedure to eradicate\textsuperscript{27}. The benefits incorporate with a long-lasting outcome. One should be cautious with the use of products having long-lasting effects as they are extra liable to root side effects. When not used appropriately, artificial wrinkle fillers may also cause defacement.

2.1.3. Homologized wrinkle fillers
Lipids are the most frequently used material in this class. Patient’s fat is surgically removed from thighs, buttocks, or, processed and then injected. Actually there are two measures (one to remove the fat and second one to inject it). Both actions can be done in one appointment. Extra fat refinement steps done in the lab are expensive and long. Results can be semi-permanent, though needing a succession of injections in due course\textsuperscript{22}. Platelet-rich plasma injections (PRP therapy) are another type of same as that of filler/volumizer. Blood is drawn from the limb, treated, and then infused into the face. The results can persist for 10 to 18 months\textsuperscript{12}. Botulinum toxin is not real wrinkle filler. In fact, botulinum toxin is inserted into facial muscles to immobilize the principal cause of creases and wrinkles. Botulinum toxin may revamp eyebrow creases, crow’s feet, and forehead wrinkles\textsuperscript{28}. Calcium hydroxylapatite is semi-enduring wrinkle filler which is a suspension in an aqueous gel and accustomed to boost elastic tissues. This is a collagen propellant to boost the surface texture of the skin, better, as well as persuades collagen to facilitate the filler to last longer\textsuperscript{14}. Poly-L-lactic acid is injectable filler used to restore vanished facial fat. This artificial polymer has been used for several years in dissolvable stitches and bone screws. This product excites the body’s own
collagen for enhanced skin quality and a more long lasting consequence. Polymethylmethacrylate beads (PMMA microspheres) are minute round, soft plastic element. The body does not absorb them, thus add volume in dermis. The synthetic PMMA microspheres collagen made from cow’s placenta are used to improve skin folds such as those around the nose and lips.

Different hazards are analogous to the use of other fillers, including staining, reddiness, and puffiness at the site of the injection, since these fillers come from the body, these injectable do not require FDA approval.

3. CONCLUSION
Wrinkle fillers are amongst the safest aesthetic measures employed at present to improve age related wrinkles and lines. However, there are many things that could be done to assist and guarantee the safety of the management. There is always some do’s and don’ts for any procedure. Do not let cost be the steer neither compromise on quality because either in the skill of the source or the excellence of the merchandise never risk making a bargain with the face.

All wrinkle fillers should be used in a healthcare background with hygienic/sterilized apparatuses. The procedures completed in house, hotels and health spas or with make shift arrangements are not being done in medical milieu, despite of who is performing them. The patient must be advised for not getting injectable wrinkle fillers from sources except a professional healthcare workplace. Its practitioners obligation to inform regarding the substance that is going to be injected and the authentic drug agencies approved wrinkle filler that is being used and was purchased directly from the manufacturer. There has been news of lot of products from industrial-grade silicone to baby oil being used. If a source did not give this information, do not let him/her carry out the practice. The daily use of a sunscreen helps to preserve the filler and help to protect against post-inflammatory pigment changes due to the needle sticks from injections. It is a saying of George Eliot – “Wear a smile and have friends; wear a scowl and have wrinkles”.

REFERENCES
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