

LE MED NASAL SPLINT TO MINIMISE SOME COMMON COMPLICATIONS IN RHINOPLASTY

Dr Andrew Tuan Anh Le MBBS (NSW), FRACGP,
FFMACCS, FASCBS (USA), FCPCA

BHC COSMEDICAL PLY LTD bhccosmedical.com.au

Other links: bhccosmeticsurgery.com.au; bhcmmedicalcentre.com.au;
www.lemed.com.au



ABSTRACT

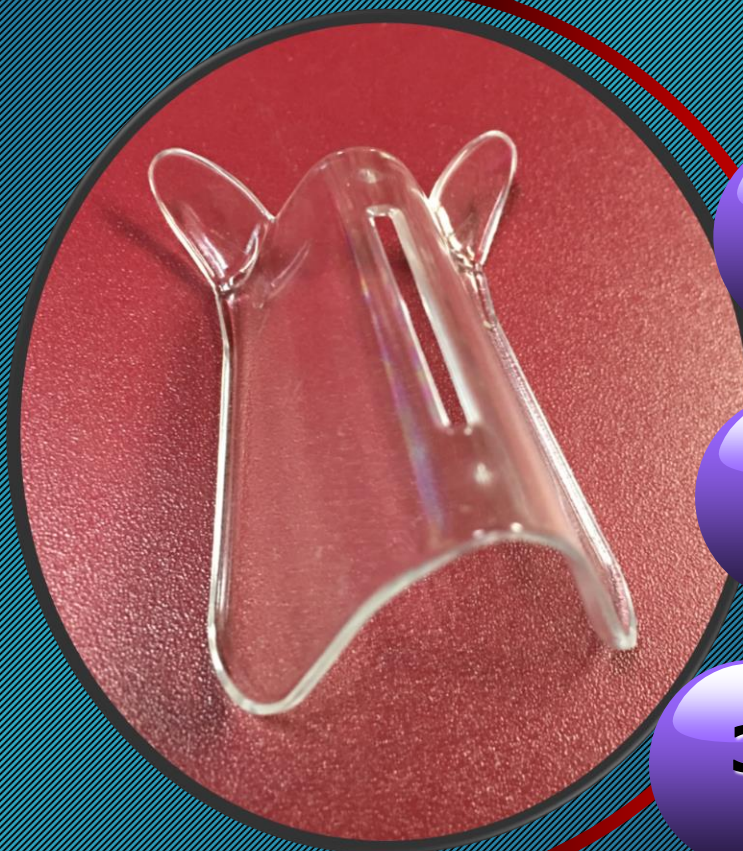


Rhinoplasty remains one of the most sought after cosmetic procedures. It can be life changing surgery for many of our patients. Sadly, it is not always a change for the better. Complications can not always be prevented which can lead to many unhappy patients. Le Med Nasal Splint is a simple device which can help minimise and prevent many complications such as swelling, oedema, haemorrhage, implant displacement, filler migration, malposition, step and open roof deformity. Le Med Nasal Splint can enhance the cosmetic result of injectable as well as surgical rhinoplasty

DECLARATION OF INTERESTS



I am the inventor of
Le Med Nasal Splint,
a major share
holder and director
of Le Med PTY LTD.



WITH THREE FEATURES:

1

INVISIBLE

2

GENTLE COMPRESSION FORCE

3

UNIQUE TRACTION FORCE

RESULT OF NOSE FILLER



RESULT OF NOSE FILLER



RESULT OF NOSE FILLER



I was happy with
this result, but...



... now I can get
better with Le
Med Nasal Splint.



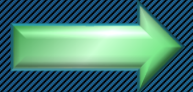
Possible result if Le Med
Splint was used



Possible result if Le
Med Splint was used

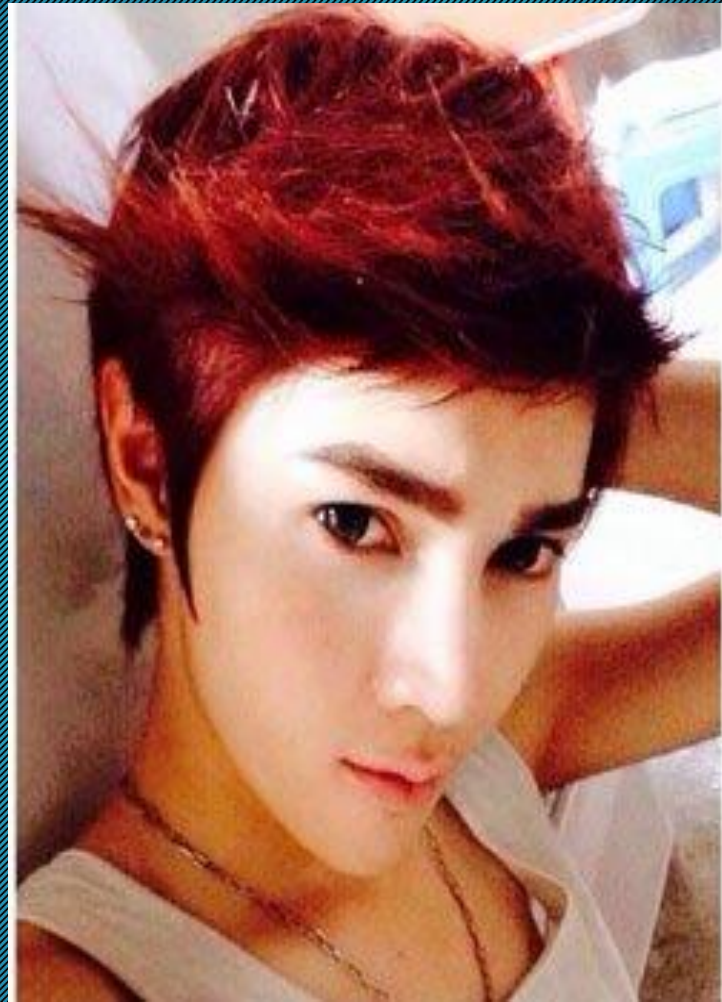


Complications of Rhinoplasty and Solutions



1. HAEMORRHAGE 2-4%

Rx compression - pressure bandage, Le Med Nasal Splint-to prevent post-op bleeding. Cauterisation. Vasoconstrictor i.e. LA with adrenaline



Complications of Rhinoplasty and Solutions



➡ 2. INFECTION variously quoted around 2%. Localised cellulitis, abscesses, or granuloma may respond to antibiotics and drainage. No consistent data to prove routine antibiotic prophylaxis reduces wound infection

Rx prompt and adequate skin inspection is the key to manage infection

➡ 3. SKIN NECROSIS: excessive undermining and cautery use, and overzealous skin thinning can increase the risk of skin necrosis

Complications of Rhinoplasty and Solutions



4. OEDEMA AND ECCHYMOSIS: last between 10 days to 14 days. Risk factors: Osteotomies, prolonged operating time, excessive nasal packing, postoperative vomiting, raised blood pressure and inadequate haemostasis

SUBCONJUNCTIVAL ECCHYMOSIS reported to be around 20%

PERSISTING OEDEMA can last several months

INFRAORBITAL HAEMATOMA - “shadows below the eyes” is reabsorbed slowly in months

Rx intraoperative intravenous steroid, postoperative head elevation, cold compression to the nose, blood pressure monitoring and Le Med Nasal Splint can minimise oedema



CASE STUDY NUMBER 1



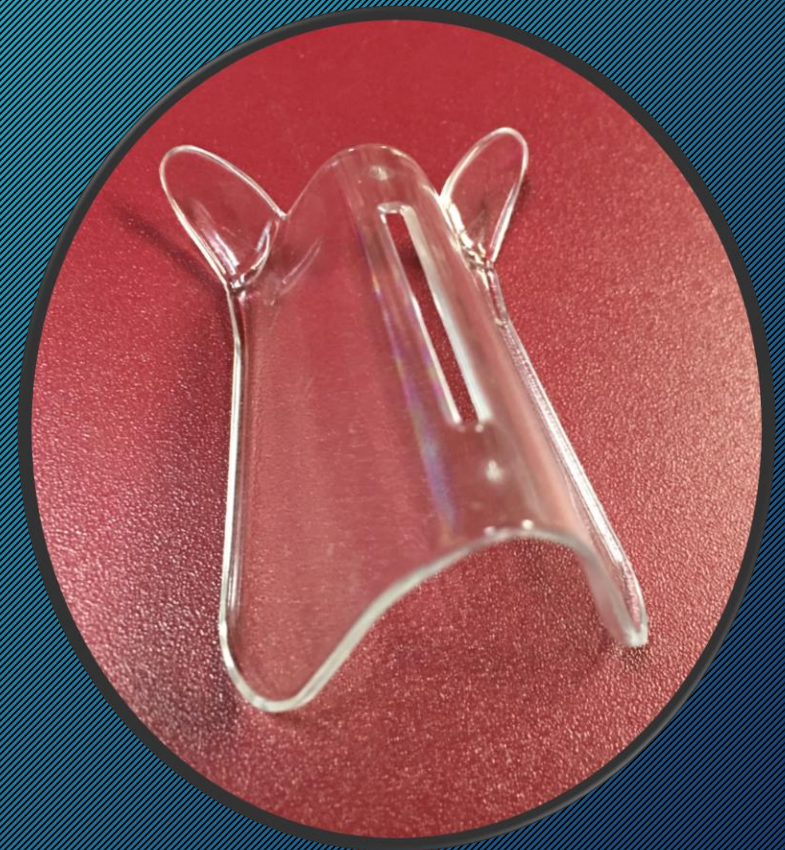
- 55 year old female. No significant medical history
- Aquamid injectable rhinoplasty 10 years ago. She was happy with the result back then
- Few years later she wanted a higher bridge and underwent surgical rhinoplasty using costal cartilage. Aquamid was removed at the time. She wasn't happy with the result due to "my nose looked fat all the time"
- She underwent a second surgery with a different doctor but still wasn't happy
- A year later she came to me for help and requesting a 3rd operation to correct her puffy nose!

CASE STUDY



We realised that her concerns were about her skin-soft tissue envelope - not nasal structure!

We didn't offer her an operation, but this →



RESULT





BEFORE



AFTER

RESULT



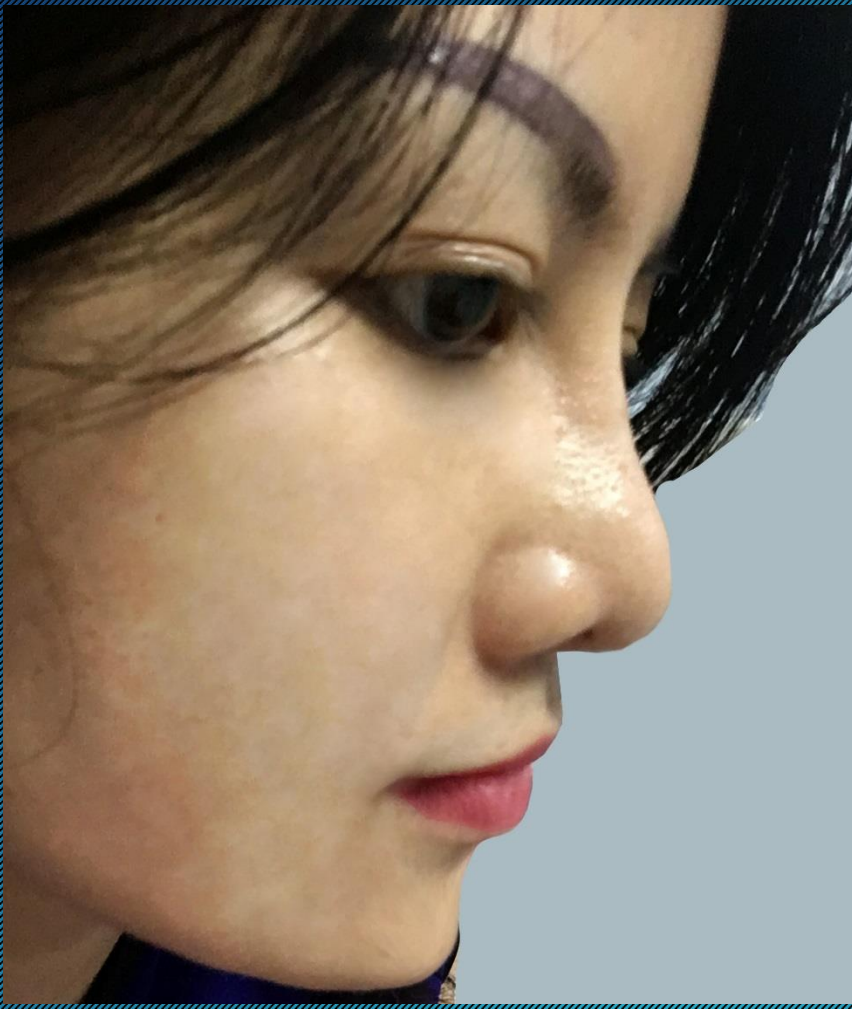
BEFORE



AFTER

RESULT

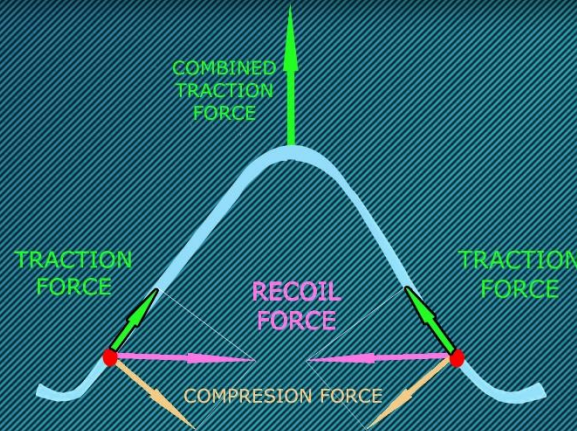
CASE STUDY NUMBER 2



UNIQUE TRACTION FORCE



THE RECOIL FORCE - TENDENCY OF THE SPLINT TO RETURN TO ITS RESTING SHAPE - IS THE COMBINATION OF THE TRACTION FORCE - PARALLEL TO THE SKIN AND COMPRESSION FORCE - PERPENDICULAR TO THE SKIN



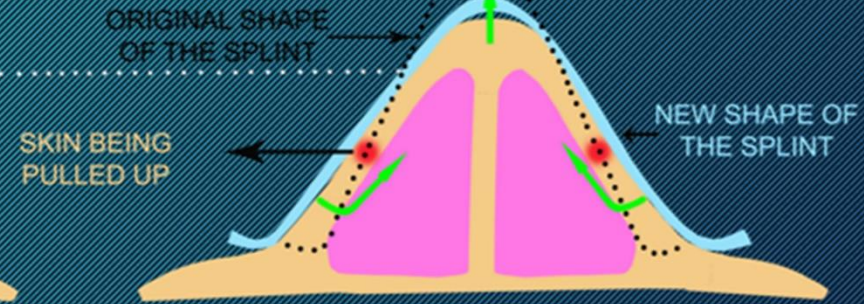
TRACTION FORCE IS CREATED BECAUSE THE SPLINT IS TRYING TO RETURN TO ITS ORIGINAL SHAPE WHILE BEING WORN



ORIGINAL SHAPE OF SPLINT



ORIGINAL SHAPE OF THE NOSE



NEW SHAPE OF THE NOSE
GREEN ARROWS SHOW DIRECTIONS OF THE TRACTION FORCE

Alar collapse, pinched tip and saddling...



Due to:

- Excessive resection of the lower lateral cartilage
- Transection of the domes
- Over-excised of cartilaginous dorsum
- **Contraction** of skin-soft tissue envelope

Le Med Nasal Splint due to its unique **traction force** will **gather extra skin medially** which in turn will **minimise skin contraction**

OPEN ROOF DEFORMITY



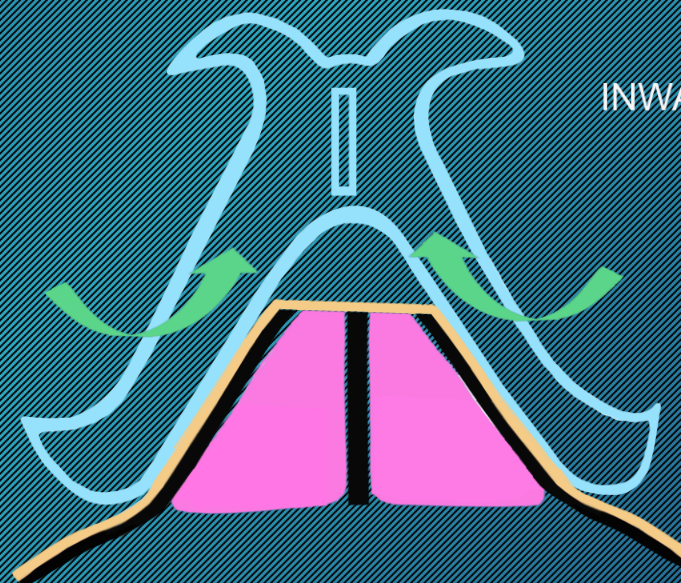
Common causes:

Greenstick cephalic fracture during osteotomies.

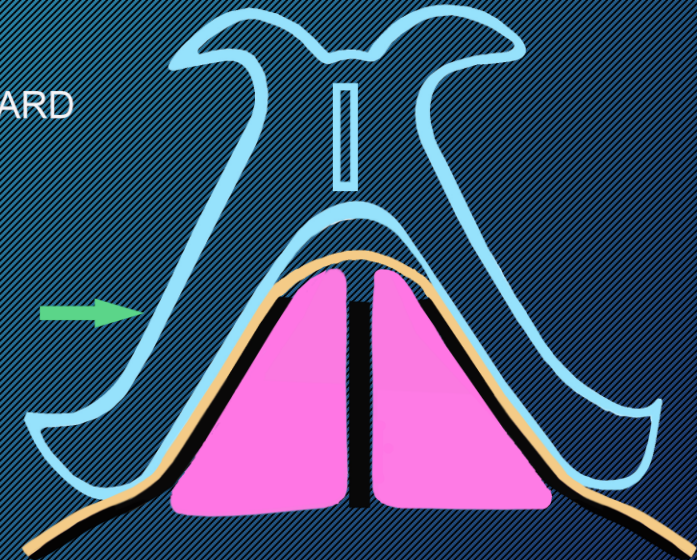
Inadequate mobilisation of the fractured segments medially

Overzealous nasal packing

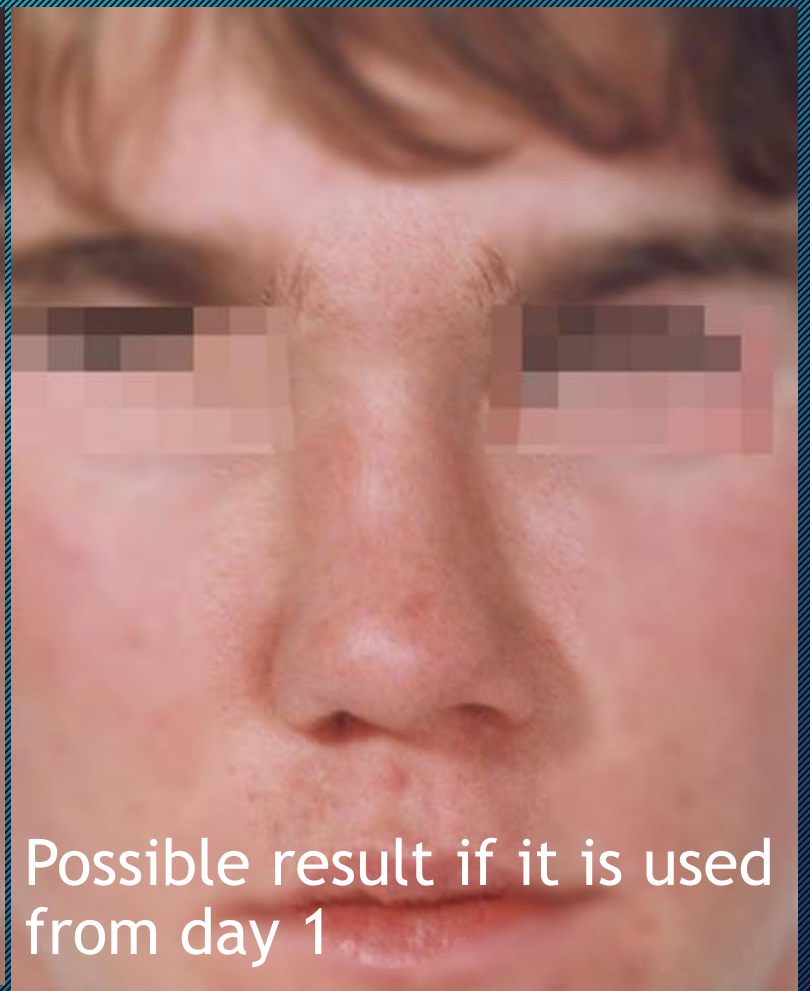
The use of Le Med Nasal Splint will aid with the correction



INWARD AND UPWARD
FORCE
MINIMISED
OPEN ROOF
DEFORMITY

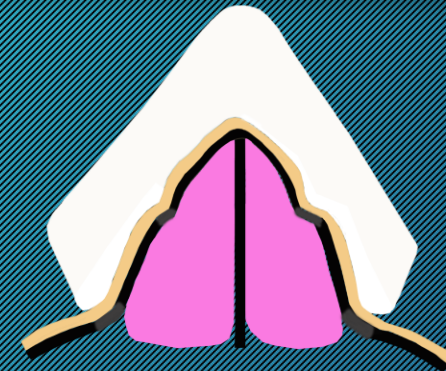


OPEN ROOF DEFORMITY - SADDLE NOSE CAN BE CORRECTED WITH LE MED NASAL SPLINT?

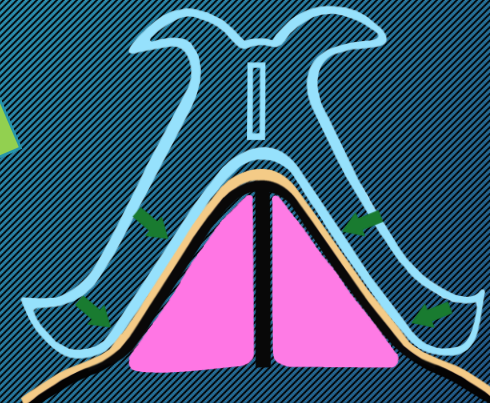


Possible result if it is used from day 1

“STEP” DEFORMITY



POSSIBLE OUTCOME
WITH
CONVENTIONAL
SPLINT



POSSIBLE OUTCOME
WITH
LE MED NASAL SPLINT

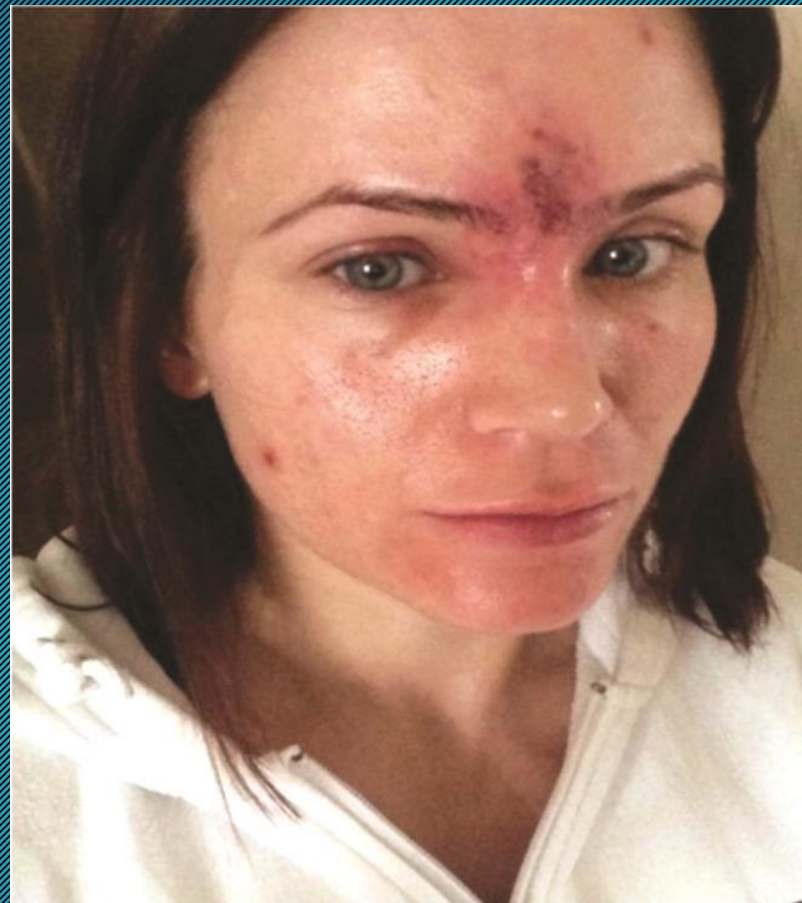
This deformity is due to a single lateral osteotomy too far medial to the nasofacial groove. Repeating the osteotomy at the right level will help to correct the problem

The use of Le Med Nasal Splint will aid with the correction

Complications of Injectable Rhinoplasty



- AVASCULAR NECROSIS with injectable rhinoplasty can be avoided with direct infiltration of LA with **adrenaline**, 10 minutes before the procedure, stay in the mid line while injecting. Others suggest compression of facial or angular arteries. Early recognition and intervention is the key: **Aspirin, nitroglycerin paste, hyaluronidase, antibiotic**



Complications of Injectable Rhinoplasty



- Infection, bruising and initial swelling are minor
- Granuloma, **chronic swelling** due to ongoing infection and/or inflammation are more serious. Injectable silicone is the worse offender

Rx Le Med Nasal Splint is an excellent tool to correct chronic swelling or oedema

Complications of Injectable Rhinoplasty



- Filler migration and displacement are not uncommon
- Malposition of filler can happen even in experts' hand

Rx Le Med splint can effectively correct filler migration/displacement and malposition.

Is this achievable with Le Med Nasal Splint?



Possible result if Le Med Splint was used

MARKET AVAILABLE NASAL SPLINTS: PLASTER, THERMAL PLASTIC AND ALUMINIUM



It has to be
custom made.

Rigid and become
loose when the
post-op oedema
subsides. A new
one needs to be
made to replace
the previous one.
Each time it can
cost between 5-10
minutes of the
surgeon's time.

Obscure the surgeon's
vision to inspect for
post-op swelling,
bruising, infection,
inflammation, skin
demarcation,
ulceration and
necrosis.

MARKET AVAILABLE SPLINTS

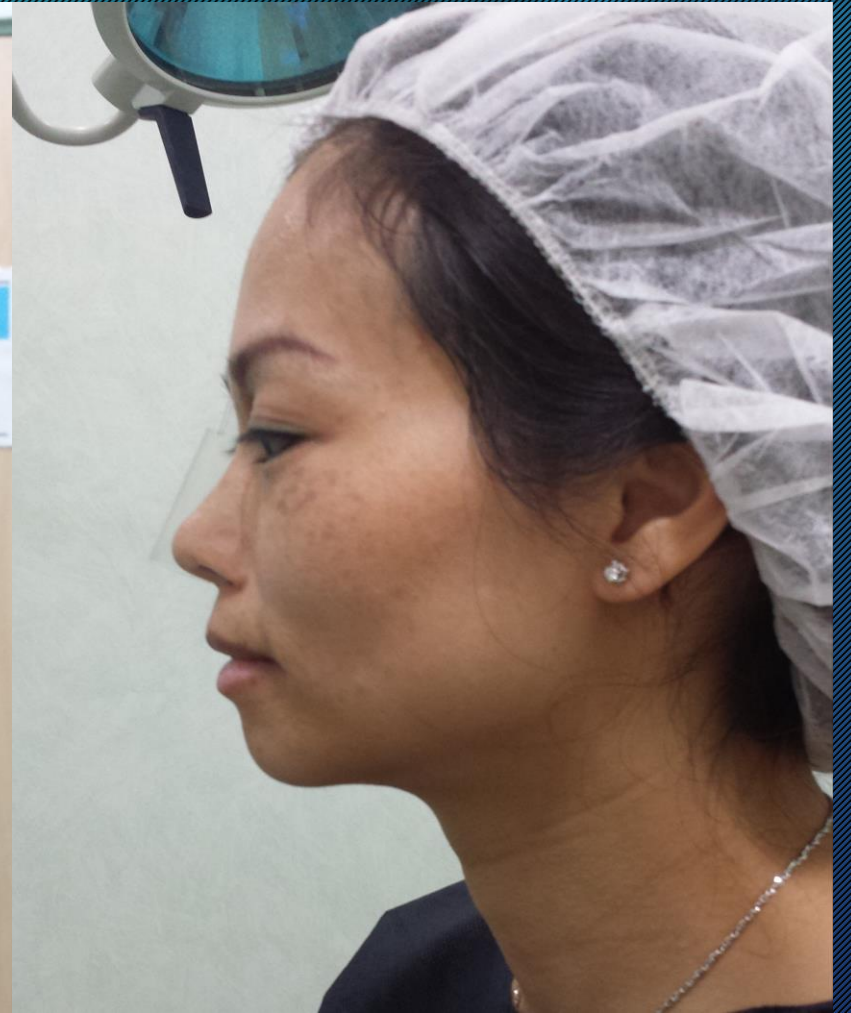


Thermoplastic Nasal Splint

MARKET AVAILABLE



LE MED NASAL SPLINT



TECHNICAL FEATURES Summary



Ergonomic
- following
facial
contour

Rolled edges
- additional
comfort and
avoid
demarcation

Gentle
changeable
compression
force between
3-5mm Hg- no
compromising
of skin
circulation
Unique
traction force

Unique split
design and
**special
elastic
material** of
the spine to
provide
ventilation
and gentle
compression
force

Unique
design and
**rigid
material** of
the side
panels
provides
maximum
protection
for the nasal
walls

High tech
transparent
bio-compatible
materials

TECHNICAL FEATURES continued



Four sizes:

- Petite 35x35x52x1mm
- Small 40x40x60x1mm
- Medium 45x45x68x1mm
- Large 50x50x76x1mm

COMPARISONS



FEATURES	LE MED	ALUMINIUM	THERMO-PLASTIC	PLASTER
CAN BE APPLIED BY PATIENT	YES	NO	NO	NO
MOULDABLE	YES, AUTOMATIC	NO	YES	YES
RESHAPE THE NOSE	YES	NO	NO	NO
GENTLE COMPRESSION FORCE & UNIQUE TRACTION FORCE	YES	NO	NO	NO
REDUCE SWELLING AND BLEEDING	YES	NO	NO	NO
REDUCE POST OP PAIN	YES	NO	NO	NO
DIRECT INSPECTION OF SKIN	YES	NO	NO	NO
PREVENT AND CORRECT MALPOSITION OF FILLER	YES	NO	NO	NO
PREVENT AND CORRECT MALUNION OF FRACTURED NASAL BONE	YES	NO	NO	NO

COMPARISONS



FEATURES	LE MED	ALUMINIUM	THERMO-PLASTIC	PLASTER
ERGONOMIC	YES	NO	YES	YES
ROLLED AND ROUNDED EDGES	YES	NO	NO	NO
VENTILATION	YES	NO	NO	NO
WATERPROOF	YES	NO	NO	NO
INVISIBLE	YES	NO	NO	NO
ENHANCE COMPLIANCE	YES	NO	NO	NO
TIME EFFICIENT	YES	NO	NO	NO
INCLUDES DORSAL PAD	YES	YES	NO	NO
AVOID EXTERNAL TAPPING	YES	YES	NO	NO

COMPARISONS



FEATURES	LE MED	ALUMINIUM	THERMOPLASTIC	PLASTER
BECOMES LOOSE WHEN ODEMA SUSIDES	NO, IT MAINTAINS CONSTANT GRIP THE WHOLE TIME	YES, NEEDS NEW ONE TO REPLACE THE LOOSE ONE	YES, NEEDS NEW ONE TO REPLACE THE LOOSE ONE	YES, NEEDS NEW ONE TO REPLACE THE LOOSE ONE
RELATIVELY LOW COST	YES	NO	NO	NO

CONCLUSIONS



Complications will happen!
Doesn't matter how good you are

OUTCOMES OF COSMETIC SURGERY

1

Happy patient vs. happy surgeon

2

Happy patient vs. unhappy surgeon

3

Unhappy patient vs. happy surgeon - **bad combination!**

4

Unhappy patient vs. unhappy surgeon

“Ultimate complication” is
a court case - adverse
outcomes affect both
doctor and patient in more
than one way: physically,
psychologically, financially
and socially. Patient
committed suicide and
doctor being assassinated
has been reported.

MINIMISE COMPLICATIONS - HOW?



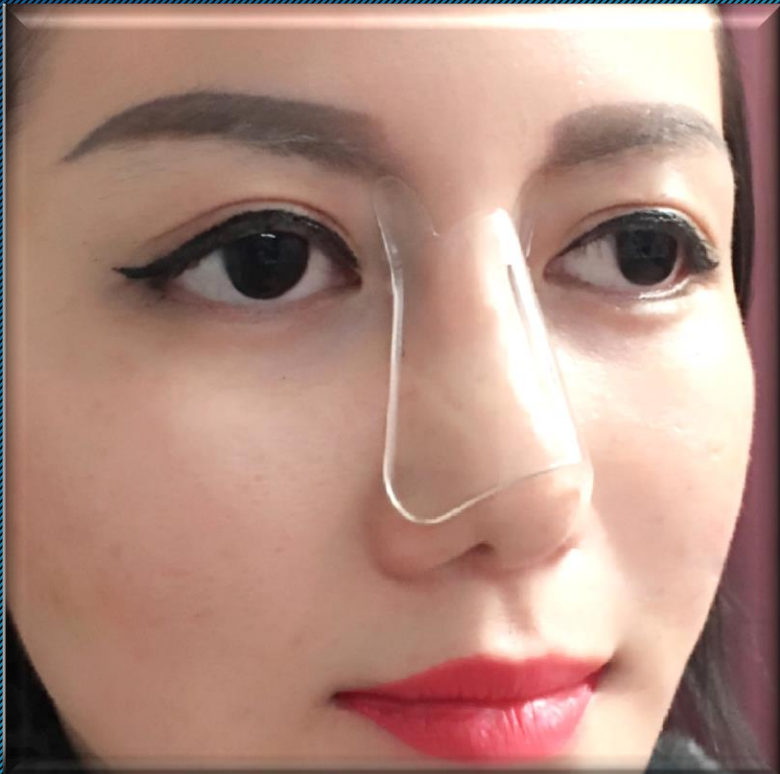
PATIENT SELECTION - **PICK THE ONE YOU CAN MATCH WITH HER/HIS EXPECTATION!**

RULE 1: Doctor should know EXACTLY what the patient wants NOT what he/she wants for the patient or what they THINK the patient might want. Break this rule you and already have an unhappy patient even before you start to work on him/her.

RULE 2: Doctor must be confident that he/she can deliver the expectation. Know your limitations.

RULE 3: No over promising. Deliver to him/her what you promise or more than what you promise. Tell them all the risks and possible complications i.e. prepare them for the worst and deliver them the best possible outcome.

MORE INDICATIONS



Can be used for post trauma or injury

Emergency Departments and First Aid kits

Reshape normal noses

Improve breathing and reduce snoring (?)

TOP 5 COSMETIC PROCEDURES



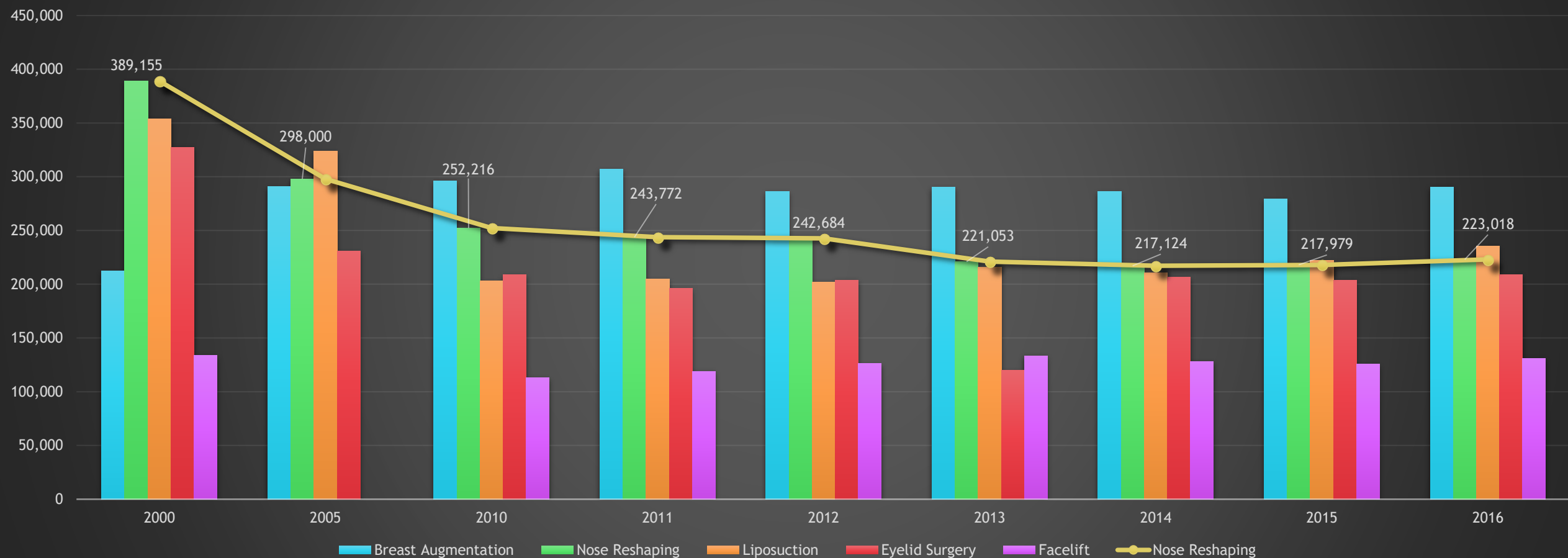
	2000	2005	2010	2011	2012	2013	2014	2015	2016
Breast Augmentation	212,500	291,000	296,203	307,180	286,274	290,224	286,254	279,143	290,467
Nose Reshaping	389,155	298,000	252,216	243,772	242,684	221,053	217,124	217,979	223,018
Liposuction	354,015	324,000	203,106	204,702	202,128	215,641	210,552	222,051	235,237
Eyelid Surgery	327,514	231,000	208,764	196,286	204,015	119,817	206,509	203,934	209,020
Facelift	133,856		112,955	119,026	126,320	133,320	128,226	125,711	131,106
Total	1,419,040	1,146,005	1,073,244	1,070,966	1,061,421	980,055	1,048,665	1,048,818	1,088,848

Source: AMERICAN SOCIETY OF PLASTIC SURGEONS

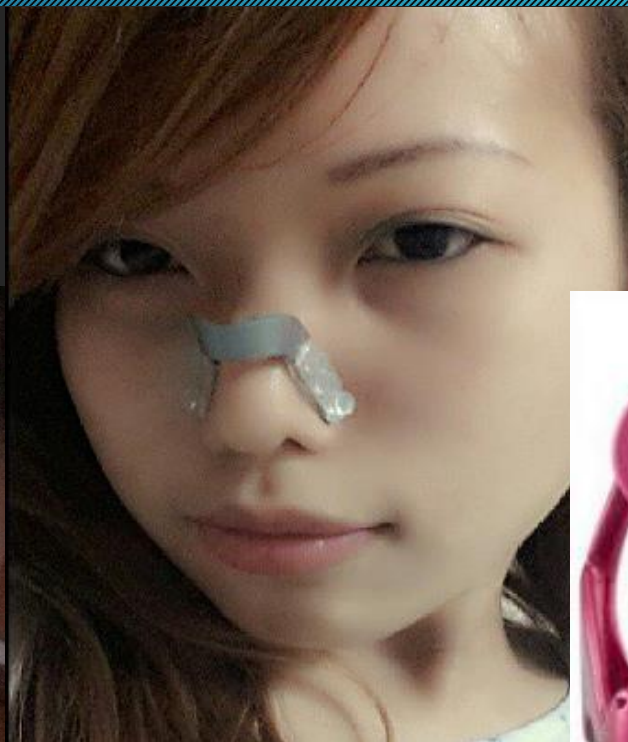
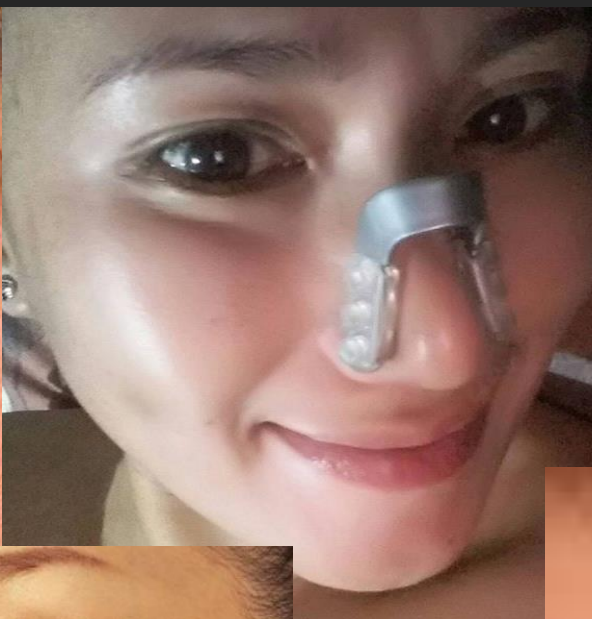
TOP 5 COSMETIC PROCEDURES



Top 5 Cosmetic Procedural Trends



INTERESTING CASES



LE MED NASAL SPLINT



Thank You!