

# ヤグチ電子工業株式会社

### YAGUCHI ELECTRIC CORPORATION





医療機器製造業 (04BZ200026) 第三種医療機器製造販売業 (04B3X10008) Approved Medical Product Manufacturer and Distributor

# 1974~1980s

Established as an assembly base for SONY Walkman® in Japan



# 1990s

200 mil. units of products manufactured for SONY Achieved 99.999% production yield Obtained SONY Green Partners and various international certifications



# 2000s

Strengthen OEM business, including G-SHOCK® manufacturing



For IRIS OHYAMA
Full-scale mass production prototyping
/ rework business





# Assisting Iris Oyama, whose group sales are 790 billion yen, with mass production prototype

### Large Appliance

### Provide Full Support for Comfortable Living



### Air Conditioner

To fit any lifestyle, we offer various settings that you can control remotely with an exclusive smartphone application. Motion-sensor enabled and Eco-mode options automatically turn on when the sensor does not detect people, operating creating easy efficiencies for the user.



Refrigerator

Front Load Washer

### Lifestyle Electrics

### Support for your evolving lifestyle



Ultra Slim & Lightweight Vacuum Cleaner

This streamlined, lightweight, stick vacuum cleaner offers a unique mop attachment that helps you complete your cleaning faster and is the first in the industry. This distinctive appliance is developed by IRIS, a leading housewares manufacturer from Japan.





Blanket Warmer

### Lighting

### Illuminating Life in Your Home



LED Ceiling Light / Metal Circuit Series
With the new structure of placing LED chips all over
the inside of the ceiling light, we meticulously
brighten up your room.



Small & Thin Ceiling Light



### Kitchen Appliances

### Your Partner for A Delicious and Healthy Lifestyle



Microwave Oven with Steam Defrosting Mode

With a specially designed cooking container, this unique steam oven allows you to defrost ingredients evenly in addition to offering various cooking programs.







IH Rice Cooker

Portable Induction Cooktop (F2F Control)

Yogurt Maker

Double-Faced Hot Plate

### Seasonal Appliances

### Providing comfort all year round



Remote Controlled Compact Globe Oscillating

Using the improved globe-shaped spiral front guard, this desktop fan enables you to maximize air flow.



Air Purifier with Humidity

Dehumidifier with Oscillating Fan

### Electronics

### Aiming to provide complete assortment of appliances for your everyday life



4K TV with HDR "LUCA Series"

Our LED TV creates a high-resolution digital image that reproduces natural colors as you see them in real life.

### 2011March 11, Entered the environmental measurement field

First in-house product [Pocket Geiger] launched World's first smartphone-connected radiation sensor









[Pocket CO2 Sensor] Visualizing the risk of airborne transmission of COVID-19



- Successful crowdfunding Kickstarter
- 100,000 units sold, share of measured values at more than 1 million points
- Received Good Design Award and German RedDot Design Award

# 2013 Entered medical device field







### Oculpad: amblyopia training tablet

- 1,000 units supplied to ophthalmology clinics in Japan
- Monodzukuri Nippon Grand Award (METI Award)
- Japan Institute of Invention and Innovation (MEXT Award)

### Pokémon ®Series

- Pokémon Stereo Test 1,000 units shipped
- Pokémon Occluder 500 units shipped

Medical device manufacturing (04BZ200026)

Type III medical device manufacturing and sales company (04B3X10008)

# Equipment

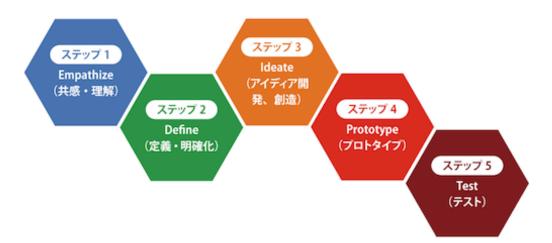
Equipment	Manufacturer / Capacity	Units
Lead-free reflow oven	Senju SAI-638	1
Chip mounter	YAMAHA YSM10	1
Chip mounter	YAMAHA YS100	1
Solder printer	YAMAHA YCP10	1
Substrate visual inspection equipment	MARANTZ 22XPPC7	1
Ditto	Rexxam sherlock-300	1
Constant temperature chamber	Az one D0-30FA	1
In-circuit tester	Okano 510ZII	1
Compact clean room	Approx. 9. 27 m²	1
Insulation resistance tester	Kikusui T0S8850	1
Ionizer	Shishido BF-2DD	10
High/constant-temperature chamber	KATO SSE78CRA	1
3D printer	MUTOH cubex trio	1
V-cut breaker	CAB	1





# Design thinking method

From prototype to mass production is achieved quickly.









# Projects by Crowdfunding







# **Executive Officers**



### **Masatoshi Sato** CEO

General Manufacturing and Sales Manager of Medical Devices, etc..
Joined the company in 1994 and worked with SONY for 20 years in design/production/quality control.
The motto is "Never say no.



**Yo Ishigaki**, Doctor (Engineering) Master (Fine Arts) Board of Director/CTO in charge of R&D, industry-academia/medical-engineering collaboration

Specially Appointed Professor at the University of Electro-Communications 2002 Joined IS Laboratory, SECOM Co. Ltd. 2012: Changed jobs after Great East Japan Earthquake



# Amblyopia (lazy eye)

Amblyopia is a condition that occurs in children in which one eye has poorer vision than the other. One of the typical symptoms of Amblyopic eye is Strabismus (squint).

3%

of newborn babies are affected by Amblyopia for every races.

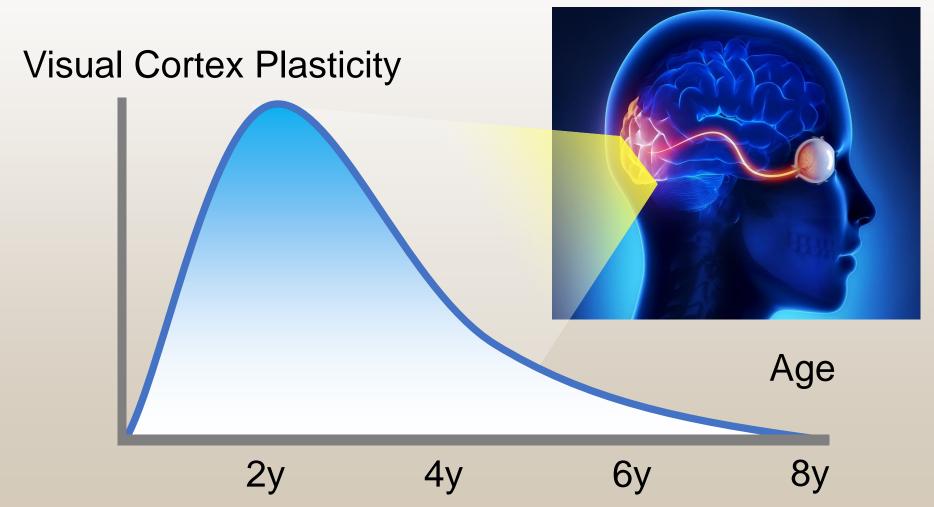




The above images are for illustrative purposes only. Photo: Adobe stock

# Mostly curable

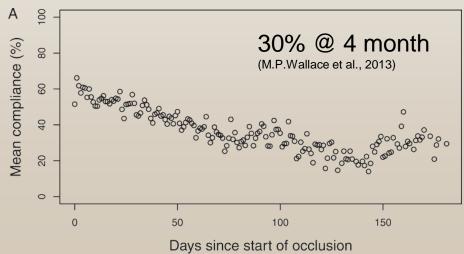
If Treated Before Six Years Old.

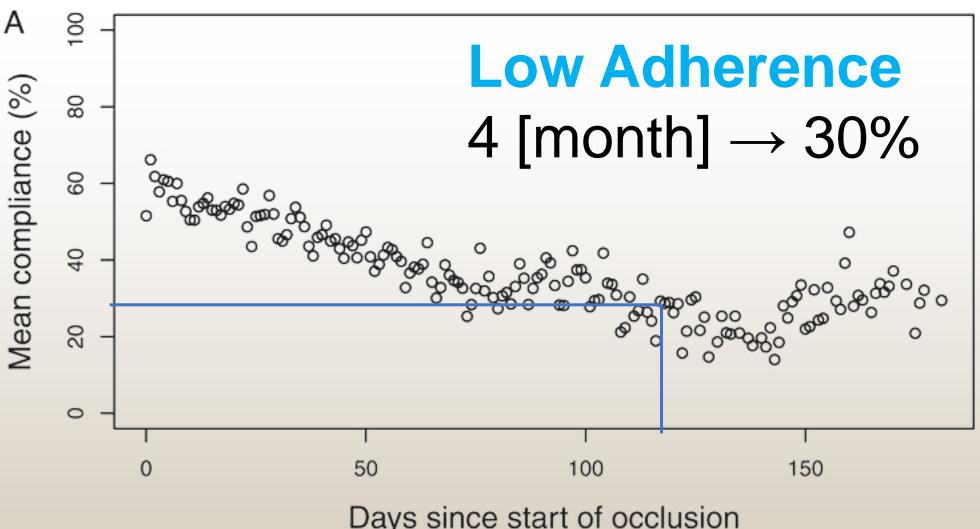


# Eye Patching on Healthy Eye









Days since start of occlusion

Mean compliance with prescribed dose across all individuals still in treatment. Days with fewer than 10 individuals remaining in treatment not shown.

Visual Psychophysics and Physiological Optics | September 2013 Compliance With Occlusion Therapy for Childhood Amblyopia Michael P. Wallace; Catherine E. Stewart; Merrick J. Moseley; David A. Stephens; Alistair R. Fielder

# Powerful eye drops for defocusing





# ဝငေါပ-ဂုဂပါီ

視機能検査訓練器 オクルパッド®



- Safer and More Effective
- Easier for patients to use









# **Eight Games for Vision Training**



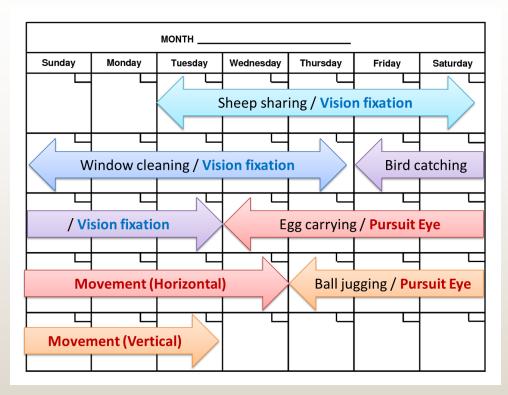








# **Training Schedule**



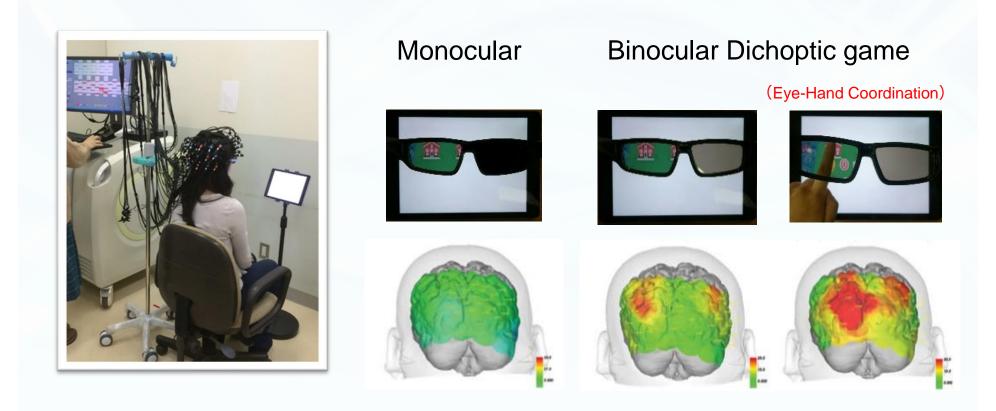




年	月	В	開始時間	ゲーム種類	プレイ時間
2015年	3月	27日	11:46	さんぱつ	00:04:26
2015年	3月	27日	12:06	カプセルトイ	00:00:01
2015年	3月	27日	12:07	カプセルトイ	00:00:02
2015年	3月	27日	12:07	さんぱつ	00:00:19
2015年	3月	27日	15:36	動物キャッチ	00:00:01
2015年	3月	27日	15:37	エイリアン	00:00:04
2015年	3月	30⊟	14:46	さんぱつ	00:00:32
2015年	3月	30⊟	14:48	さんぱつ	00:01:59
2015年	3月	30⊟	14:50	おそうじ	00:00:38
2015年	3月	30日	14:50	おそうじ	00:00:55
2015年	3月	30日	14:51	もぐらたたき	00:01:49
2015年	3月	30⊟	17:20	もぐらたたき	00:00:03
2015年	3月	30日	19:46	さんばつ	00:08:41



## Efficacy of Both eyes Open in Brain activity

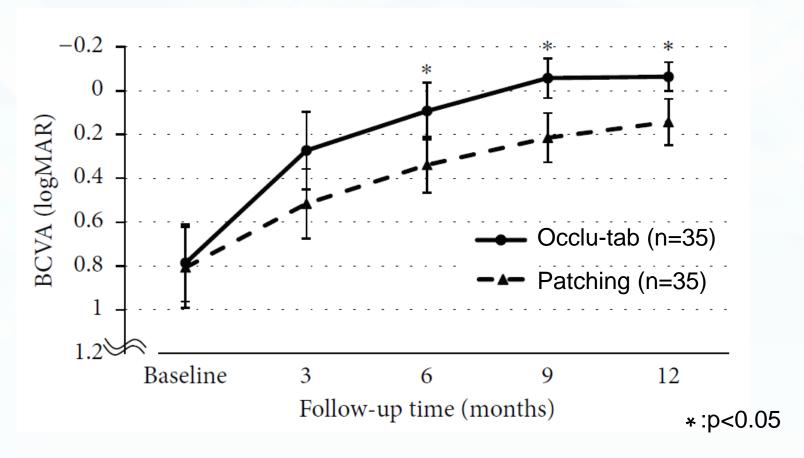


Efficacy of an Amblyopia Treatment Program with Both Eyes Open: A Functional Near-Infrared Spectroscopy Study.

(Iwata Y, Handa T, et al, Am orthopt J, 2016.)

# BCVA: Occlu-tab vs Patching

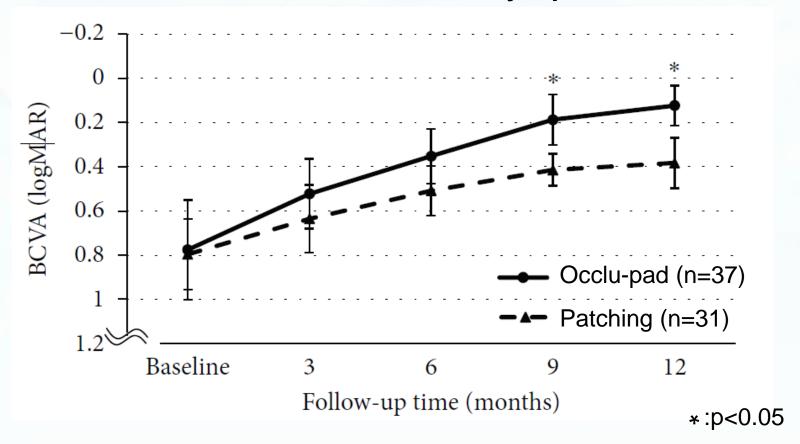
Anisometropic amblyopia



Totsuka S, Handa T, et al. Improvement of Adherence with Occlu-Pad Therapy for Pediatric Patients with Amblyopia. Biomed Res Int, 2018

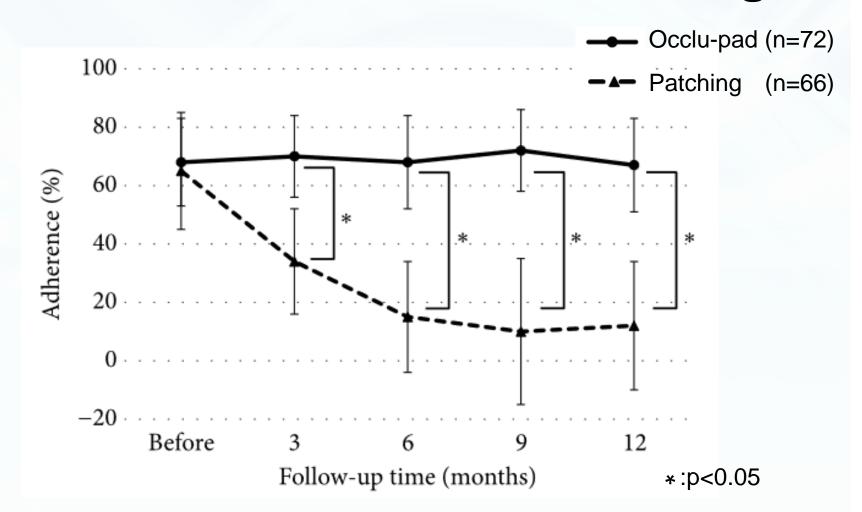
### BCVA: Occlu-tab vs Patching

### Strabismic amblyopia



Totsuka S, Handa T, et al. Improvement of Adherence with Occlu-Pad Therapy for Pediatric Patients with Amblyopia. Biomed Res Int, 2018

## Adherence: Occlu-tab vs Patching

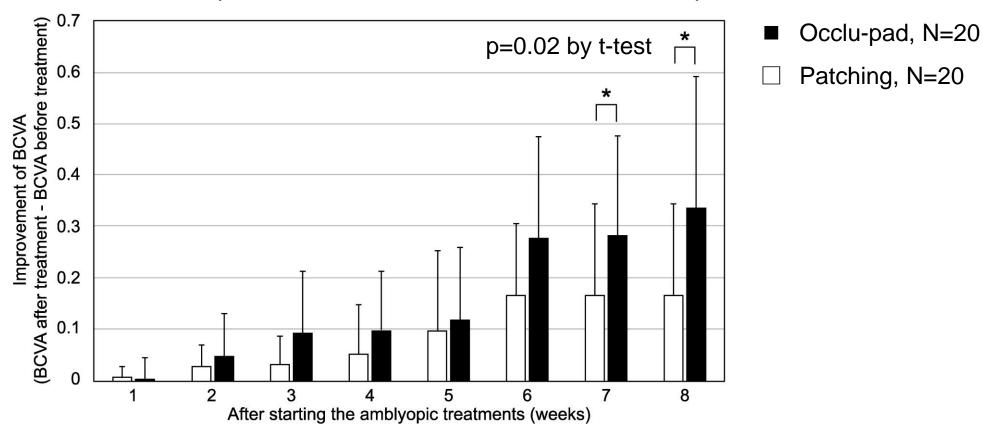


Totsuka S, Handa T, et al. Improvement of Adherence with Occlu-Pad Therapy for Pediatric Patients with Amblyopia. Biomed Res Int, 2018



### BCVA: Occlu-tab vs Patching

# In Indian Children RCT (Randomized Controlled Trial)



Handa T, et al. Comparison of the Effectiveness of Amblyopia Treatment with Eye-Patch and Binocular Occlu-Tab for the Same Treatment Duration. Indian Journal of Ophthalmology, in press

### Medical Evidences









### New Technology

### Modified iPad for treatment of amblyopia: a preliminary study

Tomova Handa, CO, PhD,\* Tomoya Handa, CO, PhD,\* Hitoshi Ishikawa, MD, PhD,\* Nobuyuki Shoji, MD, PhD,\*Tetsuya Ikeda, MD,\* Satoru Totuka, CO,\* Toshiaki Goseki, MD, PhD,\* and Kimiya Shimizu, MD, PhD\*

amispipe eye and a liquit reduction little for their normal eye and instructed to glay an ambitypic training pame displayed only for the ambityopic eye. In 5 patients corrected distance visual acuties in the ambitypic eyes impoved after 2 months: Ireatment on average by 0.38 (logarithm of the minimum angle of resolution).

celusion therapy. is the primary treatment for amblyopia, but many children find the patching regimen difficult. This leads to concerns about treatment compliance. Moreover, occlusion therapy risks side effects such as skin irritation, deprivation with the analysis of resolutional issues associated with the

### Materials and Methods

and was approved by the Kitasato University Human Sciences Erhies Committee. A total of 7 children (3-7 years of ago) with anisometropic anthlyopia were treated using the Octo-pad. The children and parents selected the amblyopia treatment using

Journal of AAPOS

refractive correction, all patients also underwent first amblyopia therapy with either the Occlu-pad or the Occlu-pad in addition

the aid of polarizing glasses, otherwise, the screen seems only to show a white backlight (Figure 1B). By designing the polarizing does a white facility (Figure 18). By designing the polaring flate to reactly much the desice plantation, information could only be provided by a human eye. Extelled potents were in-tered to the provided by a human eye. Extelled potents were in-mally perceived by a figure the could be the or aread eye, having the same transmittance as the polariting flate, while play-ings a maltyper integrating pure booled on the device (Figure 1A) for 1 board day. The transmiss product was tweeth, while the first transmission of the second of the could be an extending eye (Figure 1A). To play the game, postorom most day the areas in most expt (Figure 1D). Patterns had unsigned blacecular trians through the glosses, their projected factors was not as hading the could be a supported factor was not as the contraction of the country of

tients played the training game were automatically logged by the device. To ensure continued interest, if patients tired of the game, they were allowed to play Web games or watch videos on Occlu-

### Results

ResultS
The monthly training times that were automatically stood
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were as follows: child 1, 0.3 and -0.08; child 2, 0.22 and 0; child 3, 1,4 and 0.7; child 4, 0.4 and 0; and child 5, in the patient's amblyopic eyes (Figure 2). In the 2 patients who stopped using the Occlu-pad after their initial evaluawno stopped using the Occur-pas after their initial oxinat-tion/training period, corrected distance visual acuties in the amblyopic eyes (logMAR values) at baseline and 2 months were 0.4 and 0.3 inchild 6 and 0.22 and 0.3 in child 7, indicating no improvement visual acutiy in these pa-tients' amblyopic eyes (Figure 2).

The Occlu-pad was created by, removing only the polarising

Amblyopia in Children

equipment. Therefore, in this study, the printer visual the local destination in clideral sea makely inwised the use of spectual canablespoin in clideran has makely inwised the use of spectual propriate. Uncline theory, which require the patient to var an organich, and as to improve titual acardy by endorsing to use of the endorse, or in his were suggested that it is not

Taylor & Francis

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CONTACT Yo Issue Omn 14004q/incl.ktus.so-u.ac.jp O Doctor's Program of Medical Science, Kitasato University Godwate School, 1-15-1 Kitasato, Segeriihara 20-0171, Januar. Color versions of one or more of the figures in the article can be found online at www.tandfimine.com/ces/ # 2018 Teste & Francia

Evaluation of the Effects of the Occlu-Pad for the Management of Anisometropic

"Department of Ophthalmology, Ductor's Program of Medical Science, Kiteato University Graduate School, Sagamhara, Japan, "Department of Rehabilitation, Orthoptics and Visual Science Course, School of Allied Health Sciences, Kiteato University, Sagamhara, Japan, "Department of Ophthalmology, School of Medicins, Kiteato University, Sagamhara, Japan

ABSTRACT SECRET PROJECT OF THE CONTROL OF THE CONTR

decreased significantly with time. Iusions: Our findings suggest that the Occlu-pad is an effective tool for the management of

Yo lwata<sup>ab</sup>, Tomoya Handa<sup>b</sup>, Hitoshi Ishikawa<sup>bc</sup>, Toshiaki Goseki<sup>c</sup>, and Nobuyuki Shoji<sup>c</sup>

### Special Focus, Pediatric Ophthalmology, Original Article

Comparison of the effectiveness of amblyopia treatment with eye-patch and binocular Occlu-tab for the same treatment duration

Tomoya Handa, Hansa Thakkari, Minu Ramakrishnani, Kalpit Shahi, Vaishali Prajapatii, Sania Sayedi,

Purpose: This entiry aired to compare the connectional eye paths with Oxcla side—a boundar open type undicepts britising device—and modular that desidences in subleque to mattern. Metables in this auditory to britising device—and subles that the desidences in subleque to mattern. Metables in this auditory to the connection of the connection of the CDC of the desidence of the connection of the connection of the CDC of the desidence of the CDC of the desidence of the CDC of the desidence of the CDC of the connection of the connect

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### Clinical Study

Improvement of Adherence with Occlu-Pad Therapy for Pediatric Patients with Amblyopia

### Satoru Totsuka 👵 Tomoya Handa, 12 Hitoshi Ishikawa, 12 and Nobuyuki Shoji 💁

Received 20 June 2018; Revised 4 October 2018; Accepted 4 November 2018; Published 22 November 2018

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1. Introduction
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### Special Focus, Pediatric Ophthalmology, Original Article

Efficacy of supplemental Occlu-pad therapy with partial occlusion in children with refractive anisometropic amblyopia

Jitendra Jethani, Anisha Kamat, Kalpit Shabi, Hansa Thakkari, Sumedha Sharma

Key words: Antisometropic amblyopia, occlu-tab, occlusion, netractive amblyopia



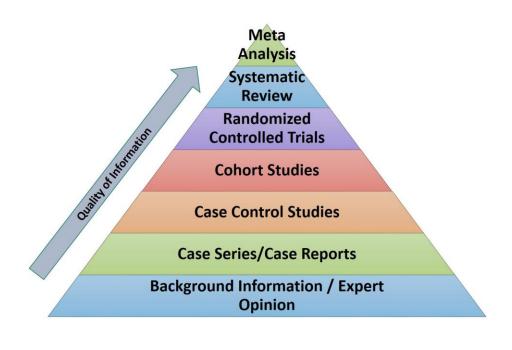
We present our study of retractive analysopia cases supplemented with publing and treated on octlo-pad and their eraults of amonths.

The polarized glasses were by the patients are made at their eraults of amonths.

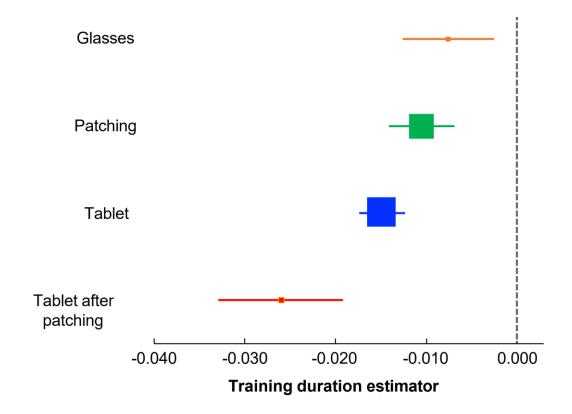
The polarized glasses where by the patients are made at their eraults of amonths and their eraults of amonths are made at the same made at their eraults of amonths are made at the same made at their eraults of a treatment of the polarized and the same through the patients are made at the same made at their eraults of a treatment of the polarized and their eraults of their eraults of the polarized and their eraults of th

# Meta-analysis combining multiple RCTs (in mid-progress)

Significantly faster visual recovery with patching + tablet combination, tablet, patching, and glasses, in that order

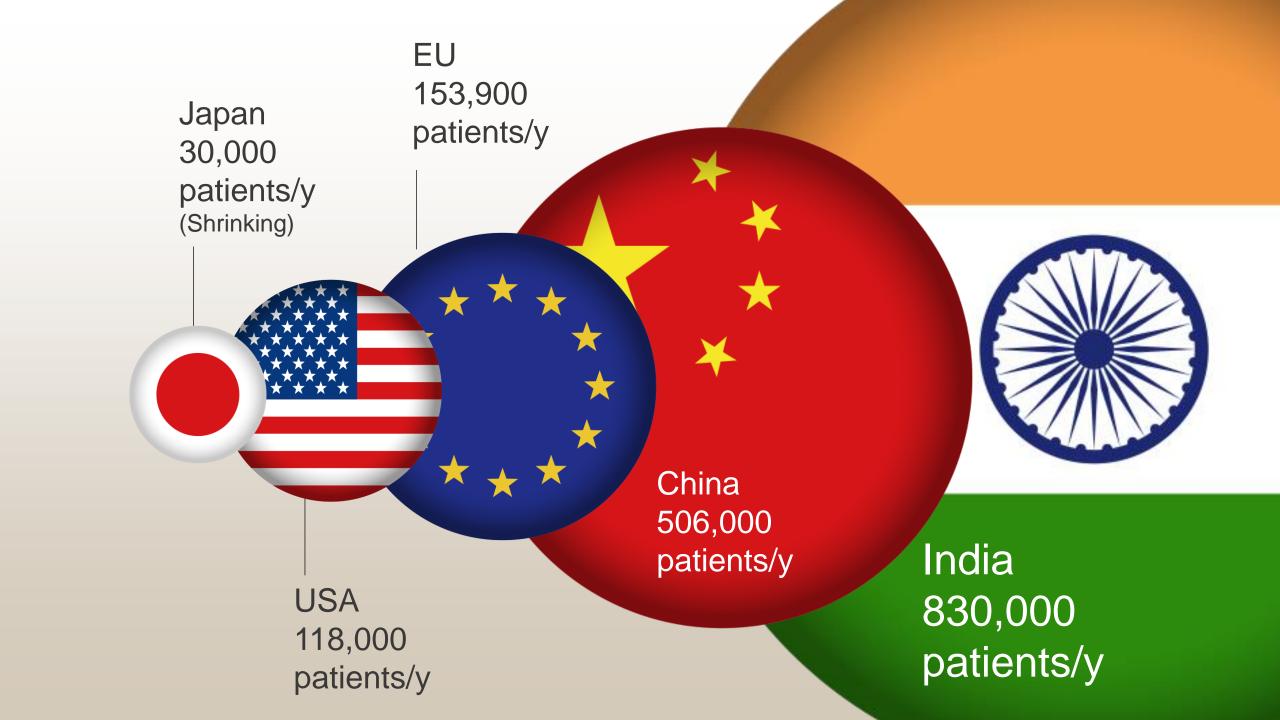


Source: https://library.triton.edu/c.php?g=433673&p=3720267



Dr. Kalpit Shar, M.D., Civil Hospital Ahmedabad, Gujarat

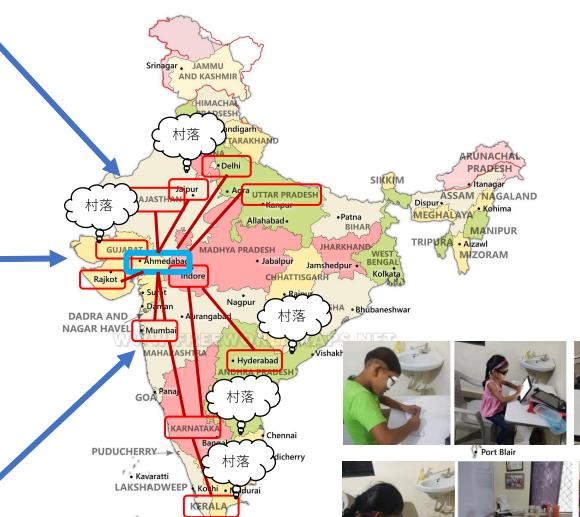




### Ganganagar HARYANA UTTARANCHAL PRADESH Gorakhpur RAJASTHAN **■ JAIPUR** Jodhpur MADHYA PRADESH GANDHINAGAR Bilaspur Raiga GUJARAT Rajkot Indore • Vadodara. CHHATTISGARH Bhilai RAIPUR San DAMAN (D&D) Dadra & Nagar Haveli SILVASSA Nashik Aurangabad BHUBAI COO ORIS MAHARASHTRA Jagdalpur Koraput **GUJARAT** District Map PAKISTAN RAJASTHAN Rann of Kachchh MAHESANA KACHCHH KHEDA PANCH MAHAL Surendernagar Vadodara VADODARA BHARUCH Rajpipla PORBANDAR ARABIAN SEA Junagadh JUNAGADH International Boundary GUJARAT - State Boundary District Boundary □Baroda State Capital Map not to Scale District Headquarter Arabian Chikhli Bhiwandi Kalyān Parbhani ■Parli Valināth Osmānābād Bhālki Pandharpur

### Clinical studies in India



















No.	Organization name	Region	Class.
1	M&J Institute, RIO Ahmedabad	Gujarat	Public
2	Stavan Eyeclinic, Ahmedabad	Gujarat	Private
3	GMERS Sola, Ahmedabad	Gujarat	Public
4	Ramkrishna Mission hospital, Rajko	Gujarat	Public
5	Baroda Children Eye Care, Baroda	Gujarat	Private
6	Max vision Eye Care, Jaipur	Rajasthan	Private
7	C H Nagari Eye Hospital, Ahmedabad	Gujarat	Public
8	K J Somaiya Eye Hospital, Mumbai	Maharashtra	Trust
9	Alakh Nayan Eye Hospital, Udaipur	Rajasthan	Public
10	BPA Jamnabhai School of Optometry	Gujarat	Public
11	Vismit Eye Clinic	Maharashtra	Private
12	Rajawadi Hospital	Maharashtra	Public
13	Shradha Health Care Pvt. Ltd.	West Bengal	Private
14	Salt Lake Clinic	West Bengal	Private
15	iKure	West Bengal	Others
16	Subset Systems	Gujarat	Others
17	Bareja Eye Hospital, Blind People's Association	Gujarat	Public
18	Tejas Eye Hospital Run by Divyajyoti Trust	Gujarat	Trust
19	Children Eye Care and Adult Squint clinic (Amber clinics)	Gujarat	Private
20	Ram Krishna Eye Hospital	Uttar Pradesh	Private
21	Bhalanetra Super Speciality Eye Hospital	Maharashtra	Private
22	SEWA Rural	Gujarat	Trust
23	Prime Eye Care	Gujarat	Private

## We are

- Looking to collaborate with national hospitals such as AIIMS
- Looking for people interested in marketing and manufacturing in India
- Looking to collaborate with researchers for Amblyopia treatment through video games