

A Dissertation Report on



**Study the Chronic Kidney Disease Market in INDIA: Pipeline
Review, Developer Landscape, and Competitive Insights**

**Study the Role of Uremic Toxins in Progression of CKD and
Market Potential of Products used for Elimination Uremic Toxins
in India**

Market Strategy for the Renal medicine - Renolog

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Introduction

- The main function of kidneys filter wastes and extra fluids from your blood and excreted in your urine.
- Chronic kidney disease (CKD) describes the gradual loss of kidney functions.
- When chronic kidney disease reaches to an advanced stage, high levels of fluid, electrolytes and wastes can accumulate up in your body.
- **Signs and symptoms of Chronic kidney disease may include: -**
 - ✓ Fatigue and weakness
 - ✓ Changes in how much you urinate
 - ✓ Muscle twitches and cramps
 - ✓ Swelling of feet and ankles
 - ✓ High blood pressure
- **Diseases and associated conditions that cause chronic kidney disease include:**
 - ❖ Type 1 or type 2 diabetes mellitus
 - ❖ Hypertension
 - ❖ Polycystic kidney disease
 - ❖ Prolonged obstruction of the urinary tract, from conditions such as enlarged prostate, kidney stones and some cancers.

Rationale

To study and understand the market of Chronic kidney disease and their product offerings in various segments through competitive analysis and pipeline developments for opportunities assessment in this segment.

Objectives

1. To Study the Chronic Kidney Disease Market in INDIA: Pipeline Review, Developer Landscape, and Competitive Insights

Sub Objectives

- Prevalence of CKD in India
- Pathophysiology
- Diagnosis
- Treatment modalities specific emphasis on conservative treatment therapy for Chronic Kidney disease and Transplant
- Treatment gaps
- Market segmentation: complete landscape of CKD market: company profiles, product basket and equivalent product la Renon nephrology basket
- Market opportunities and future trends

2. Market Strategy for the Renal medicine – Renolog

Sub - Objective

- To promote and establish that Alpha ketoanalogous has better results in treatment of Chronic kidney patients as compared to other traditional drugs.
- To establish that use Alpha ketoanalogous will help to reduce economic burden and most economical as compared to any other treatment option.
- To make and sustain Renolog as market leader.

3. To Study the Role of Uremic Toxins in Progression of CKD and Market Potential of Products used for Elimination Uremic Toxins in India.

Methodology

Study type – Cross sectional and Descriptive

Data collection

- Primary
- Secondary

Data Collection Methods

- Information is collected from various publicly available as well as organizational financial Report.
- Survey based Questioners.
- Public sources involved of different associations and governments, annual Reports and statements of companies and research academia etc.

Sample size (in Second topic) – 60 Doctors

Statistical Analysis software: MS -Excel

Study duration : 3 months

Data Analysis

Prevalence of Chronic kidney Disease in India

- Prevalence of Chronic Kidney disease Approximately 800 per million population
- Incidence of ESRD approximately 150-200 per million population
- 18000-20000 patients(10%of new ESRD) in India get Renal Replacement Therapy
- India CKD registry DATA

152 centres contributing treatments

Data of approximately 30,000patients available

Males constitute 70% with mean age between 45-50ys of the Adult population

70% of patients in CKD stage 4 -5

Diabetes as a cause of CKD approxiametely 30% of patients

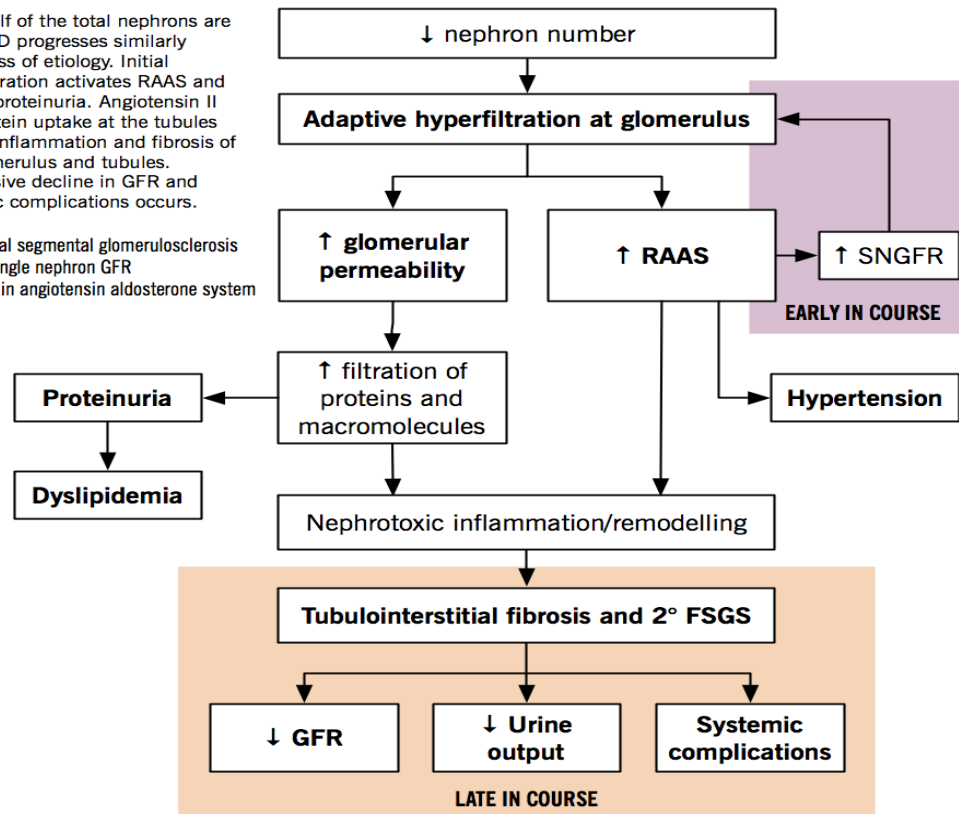
Pathophysiology

Pathogenesis of chronic kidney disease

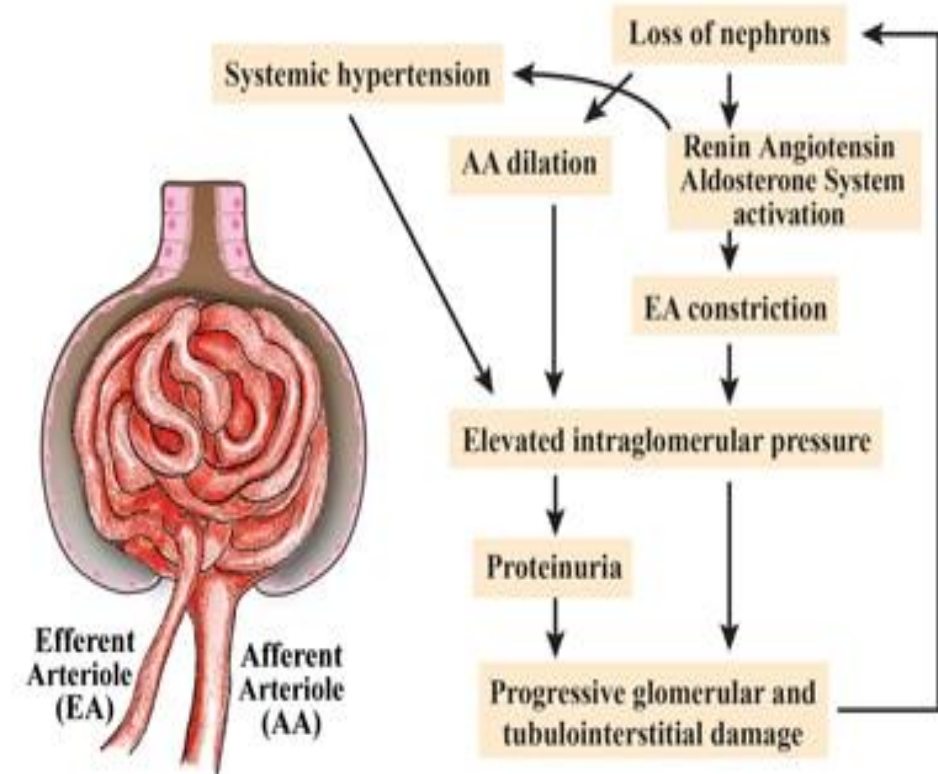
Eric Wong

Once half of the total nephrons are lost, CKD progresses similarly regardless of etiology. Initial hyperfiltration activates RAAS and causes proteinuria. Angiotensin II and protein uptake at the tubules causes inflammation and fibrosis of the glomerulus and tubules. Progressive decline in GFR and systemic complications occurs.

FSGS Focal segmental glomerulosclerosis
SNGFR Single nephron GFR
RAAS Renin angiotensin aldosterone system



Progression of Chronic Kidney Disease



Diagnosis

Diagnosis of Kidney disease play an important for the treating of disease

Various methods of diagnosis of Kidney diseases:-

- **Patients history collection**
- **Physical examination**
- **Blood tests**
- **Urine tests**
- **Radiological Test**
- **Kidney Biopsy**

Treatment Gaps

There certain gaps were in current treatment regimen of chronic kidney diseases these were are as follows :-

- Prevalence of Uncontrolled Hypertension.
- High Prevalence of Uncontrolled Diabetes.
- Use of ACE Inhibitor.
- Financial Barrier.
- Lack of Proper Guidelines
- Lack of Qualified Personnel.

Treatment modalities specific emphasis on conservative treatment therapy for CKD and transplant

Kidney Transplants

Kidney transplant is surgery to place a healthy donor kidney into your body. A working transplanted kidney, does a better job filtering wastes, and keeping you healthy than dialysis.

The pros and cons of a kidney transplant.

Pros

- It makes feel healthier and have a better quality of life.
- Patients have fewer diet restrictions.
- No need of dialysis.

Cons

- A kidney transplant requires surgery, which involves certain risks, such as infection.
- You'll need to take anti-rejection medicines—which may cause other health problems

Conservative Management

Conservative management for kidney failure means that health care teams continue care without dialysis, or a kidney transplant. The main focus of care is to, increase the quality of life.

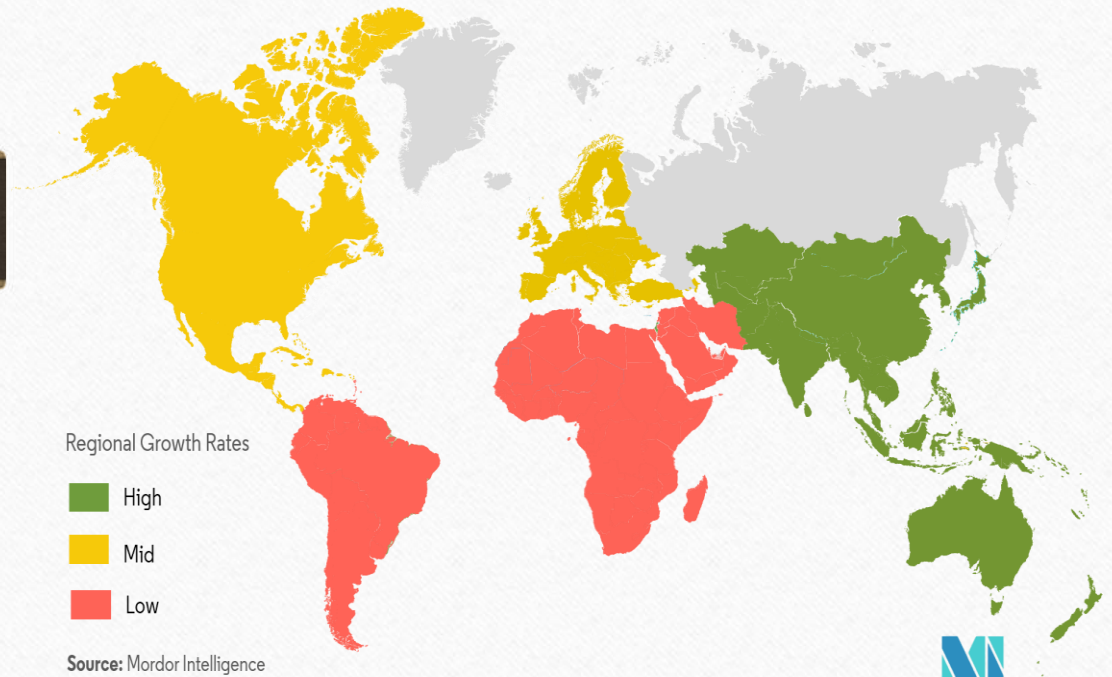
Treatment includes

- Managing problems associated or caused by kidney failure, such as anaemia.
- Medicine which help to decrease the progression of chronic kidney diseases.
- Change in Food and water intake habit

Market segmentation: complete landscape of CKD market: company profiles, product basket and equivalent product La Renon nephrology basket

Global Market of Chronic Kidney Disease

Chronic Kidney Diseases Market - Growth Rate by Region (2019 - 2024)



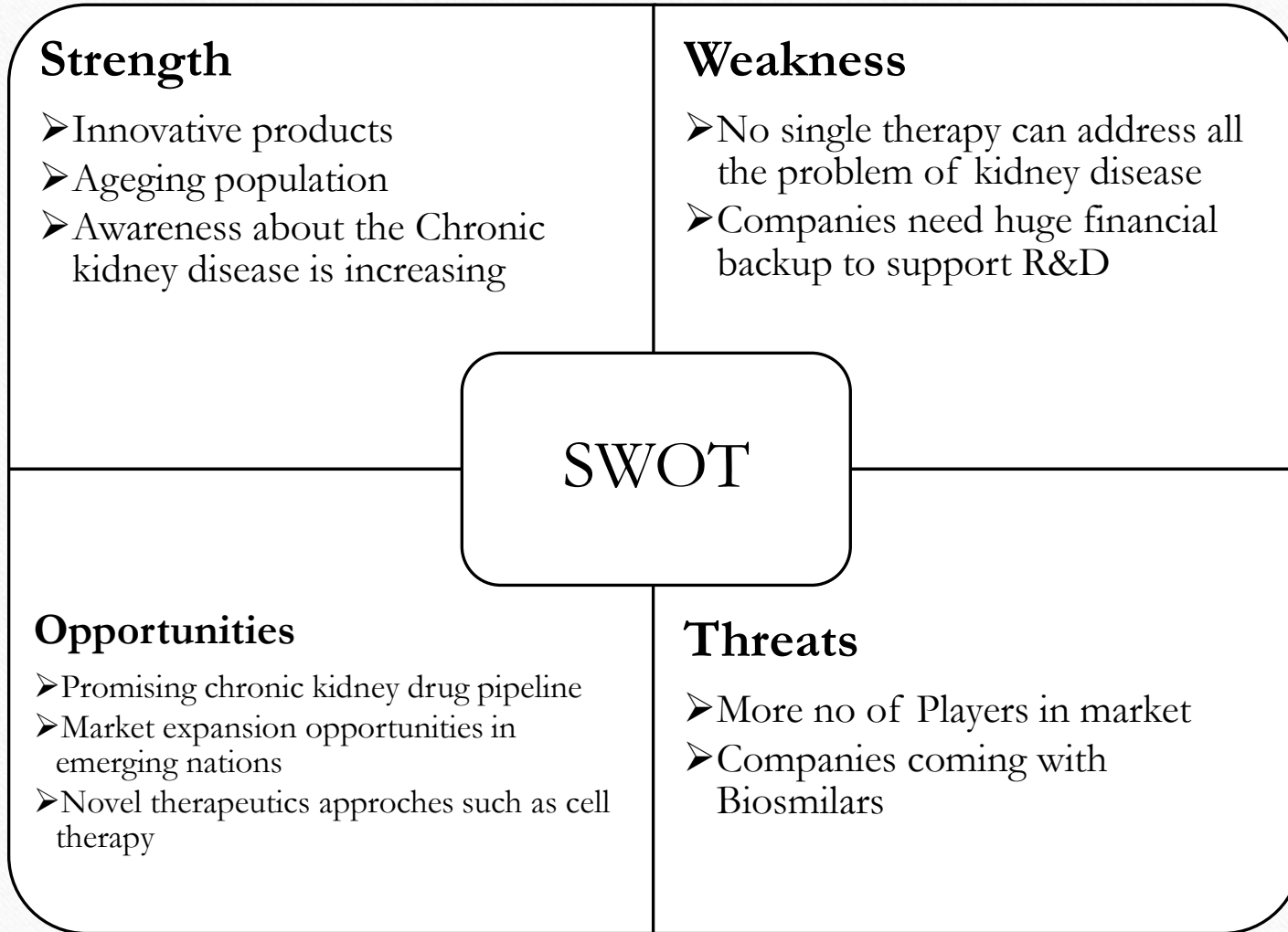
The figure shows the global growing market of Chronic kidney diseases

- The Global Renal Disease Market is expected to register a CAGR of 6.32% to reach USD 133,451.6 Million till 2023.
- According to the National Chronic Kidney Disease Fact sheets in 2017, around 30 million people in the US had chronic kidney disease.
- The chronic kidney disease segment accounted for a value of USD 60,228.68 million in 2017.
- In Australia, treatment for all current and new cases of kidney failure through 2020 will cost an estimated \$12 billion.
- The rising number of dialysis patients is anticipated to boost the market growth of dialysis centres

Indian Market of Chronic Kidney Disease

- Global Burden of Disease 2015 ranks chronic kidney disease as the eighth leading cause of death in India.
- Incidence of Chronic Kidney Disease in India is increasing at an alarming rate; at least 16% of the population suffers from Chronic Kidney Disease.
- Approximately 1,80,000 kidneys are needed for transplantation in India every year to save the lives of patients suffering from kidney failure. Just about 4,000 transplants are conducted annually.
- The mean age of people with Chronic Kidney Disease was assessed and it was found that about 20% of patients aged 38 years.
- In India, at least 30% of diabetics will develop chronic kidney disease because of diabetes.
- In India, 2,00,000 new patients need dialysis treatment every year
- The majority of chronic kidney failure patients are diagnosed in the End stage; almost 50% first see nephrologists only in the End stage.

Market Dynamics



Drivers

- Rise in the incidence of cardiovascular disorders and diabetes
- High incidence of chronic kidney disease
- Increase in the global geriatric population

Restraints

- Competition from biosimilars
- Complex drug development

Pipeline Development

Drug Name	Developer(s)	Phase of development	Type of Molecule	Mechanism of Action	Dosage Frequency	Indication(s)	Route of Administration
Auryxia	Keryx Biopharmaceuticals	Marketed	Small Molecule	Phosphate Binding Protein Modulators	Thrice daily	Hyperphosphatemia -CKD	Oral
JYNARQUE	Otsuka Pharmaceuticals	Marketed	Small Molecule	Vasopressin in V2 Receptor Antagonists	Twice Daily	Autosomal Dominant Polycystic Kidney Disease	Oral
Velphoro	Vifor Pharma	Marketed	Small Molecule	Phosphate Binding Modulator	Thrice Daily	Hyperphosphatemia -CKD	Oral

S. no	Drug Name	Developer(s)	Phase of Development
1	Anifrolumab	AstraZeneca	Phase I
2	Blisibimod	Anthera Pharmaceuticals	Phase II
3	Ceftolozane	Merck Sharp & Dohme	Phase I
4	Belimumab	Human Genome Sciences	Phase II

S.no	Drug Name	Developer(s)	Phase of Development
1	A717	Glycadia Pharmaceuticals	Preclinical
2	ANG-3586	Angion Biomedica	Preclinical
3	DN-007	Goldfinch Bio	Preclinical
4	INS-3001	Inositec	Preclinical

Product Basket Analysis

. The major product includes in following category: -

- ❖ Haemodialysis
- ❖ Renal medicine
- ❖ Transplant
- ❖ Renal nutrition

Haemodialysis Medicine Segment Analysis

Darbepoetin alfa Molecule

BRAND	COMPANY	MAT VAL GR APR 20	Market Share
CRESP	DR. REDDYS LABORATORIES LTD	2.0	26%
DARGEN	LUPIN LTD	7.5	25%
KABIDARBA	FRESENIUS KABI INDIA PVT LTD	-33.4	11%
JUVOBIN	LA RENON	29.6	7%
CRESP-ONCO	DR. REDDYS LABORATORIES LTD	-25.5	7%
DARBELIFE	HETERO HEALTHCARE LTD	15.4	6%
DARBITOP	ALNICHE LIFE SCIENCES PVT.LTD	519.4	6%
ZYNESP	ZYDUS CADILA	30.3	3%
DARBECURE	EMCURE PHARMACEUTICALS LTD	70.9	2%
DARBOSIS	MICRO LABS LTD	-57.9	2%

Table: - The table contain the various brands of the darbepoetin alfa molecule and their growth rate in 2020 and market share in which Dr, Reddy's lab having a maximum share.

Market Share of various Brands of Darbepoetin Alfa molecule in India

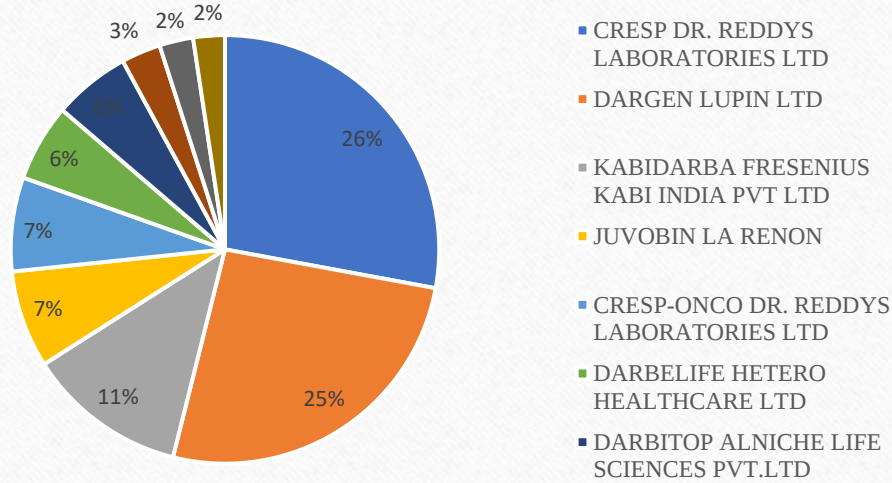


Figure : - The figure shows market share of different brands of Darbepoetin molecule in India Dr. Reddy's having maximum share 26% followed by the Dargen brand of Lupin.

Growth Trends of various brands of Darbapoetin alfa molecule of in India

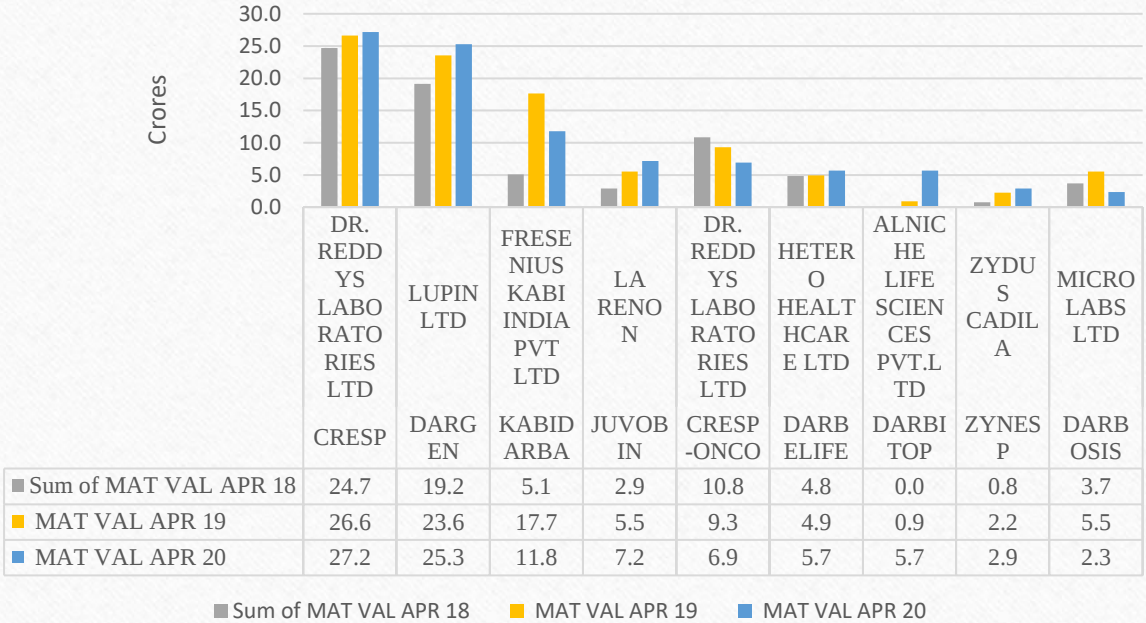


Figure : - The figure shows about the growth of the various brands in that Cresp is still in growth phase kabidarba is fluctuating growth phase and juvobin is showing the gradual growth.

Disodium hydrogen citrate molecule

BRAND	COMPANY	MAT VAL GR APR 20	Market Share
ALKASOL	STADMED PVT. LTD	17.9	33%
CITRALKA	PFIZER LTD	27.3	32%
CITAL	INDOCO REMEDIES LTD	4.2	26%
ORICITRAL	TTK HEALTHCARE LTD	0.7	3%
ALKACITR ON	GLUCONATE HEALTH LTD	7.8	1%
EXELYTE	USV PVT LTD	-12.4	1%
ALKARAT E	MACLEODS PHARMACEUTICALS PVT.LTD	0.9	1%
UROSOL	SYNCHEM LAB	10.3	1%
ALKEL	ALKEM LABORATORIES LTD.	-40.3	1%
ALKORINA	EISEN PHARMACEUTICALS CO. PVT. LTD	-9.5	0%
SEROCIT	LA RENON	-7.9	0%

Table : - The table contain the various brands of the Disodium hydrogen citrate molecule and their growth rate in 2020 and market share in which Stadmed pvt ltd having a maximum share.

Growth Trends of various Brand Disodium hydrogen citrate market in India

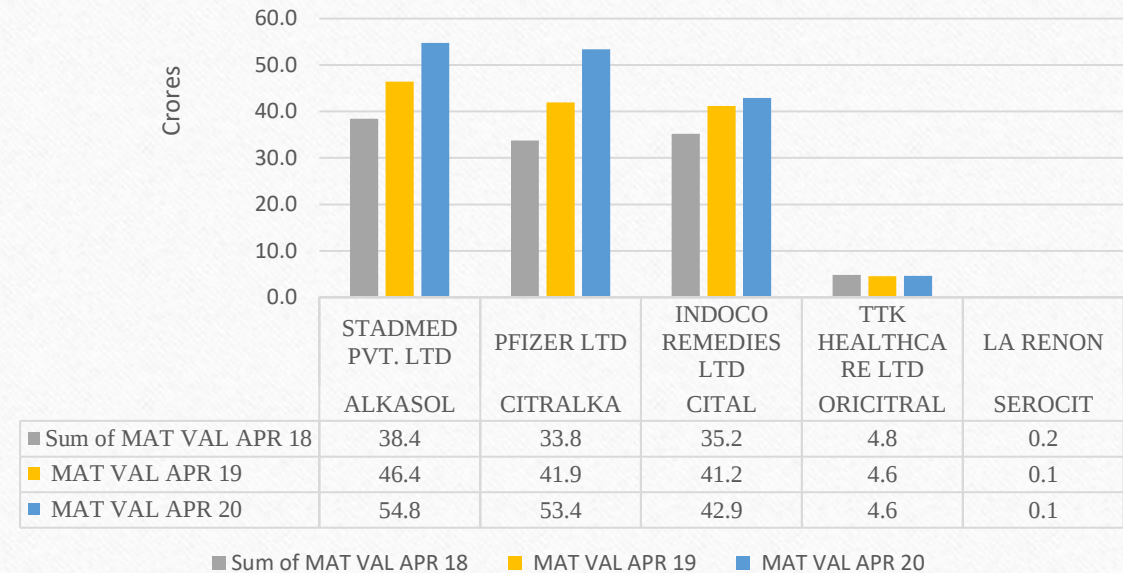


Figure : - The figure shows about the growth of the various brands in that Alkasol is still in growth phase Citralka is also in growth phase and Serocit is shows decline growth.

Ferric hydroxide sucrose complex

BRAND	COMPANY	MAT VAL APR 20	Market share
OROFER-S	EMCURE PHARMACEUTICALS LTD	85.8	44%
IMAX S	ARISTO PHARMACEUTICALS PVT.LTD	32.2	16%
HEMFER	ALKEM LABORATORIES LTD.	12.4	6%
R.B TONE	MEDLEY PHARMACEUTICALS	12.2	6%
FERIKIND S	MANKIND PHARMACEUTICALS LTD.	8.7	4%
RUBIRED S	MACLEODS PHARMACEUTICALS PVT.LTD	5.8	3%
VITCOFOL S	FDC LTD.	4.8	2%
FERONIA	ZUVENTUS HEALTHCARE LTD	4.2	2%
IROZORB S	MACLEODS PHARMACEUTICALS PVT.LTD	3.5	2%
LIVOGEN	MERCK SPECIALITIES PVT.LTD	3.4	2%
QRON	LA RENON	1.3	1%

Table: - The table contain the various brands of the ferric hydroxide sucrose molecule and their growth rate in 2020 and market share in which Emcure pharmaceutical ltd. having a maximum share.

Growth Trends of various brands of the ferric hydroxide sucrose complex molecule in India

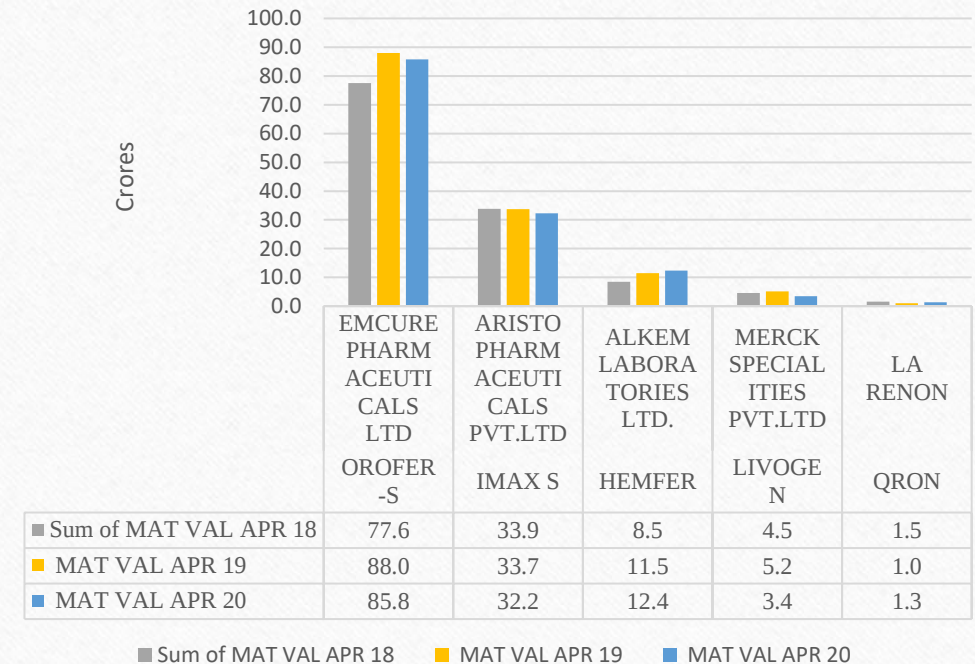


Figure: - The figure shows the growth of the various brands in that Orofer-s show fluctuating growth Imaxsa is showing slight decline and Qron is shows fluctuation growth.

Erythropoietin products

BRAND	COMPANY	MAT VAL GR APR 20	Market share
RENOCRIT	ZYDUS CADILA	136.6	48%
ANFOE	LA RENON	39.6	33%
TRANSFER	ALNICHE LIFE SCIENCES PVT.LTD	-12.4	18%
EPOTREND	ANTHEM BIOPHARMA PVT LTD	-26.0	1%
EPOFIT	INTAS PHARMACEUTICALS LTD		0%
ALPHARED	SAMARTH LIFE SCIENCES PVT LTD		0%

Table: - The table contain the various brands of the Erythropoietin molecule and their growth rate in 2020 and market share in which Zydus cadila having a maximum share of 48% and Anfoe brand of La renon is having 33% market share in India

Growth Trends of the various brands of Erythropoietin molecule in India

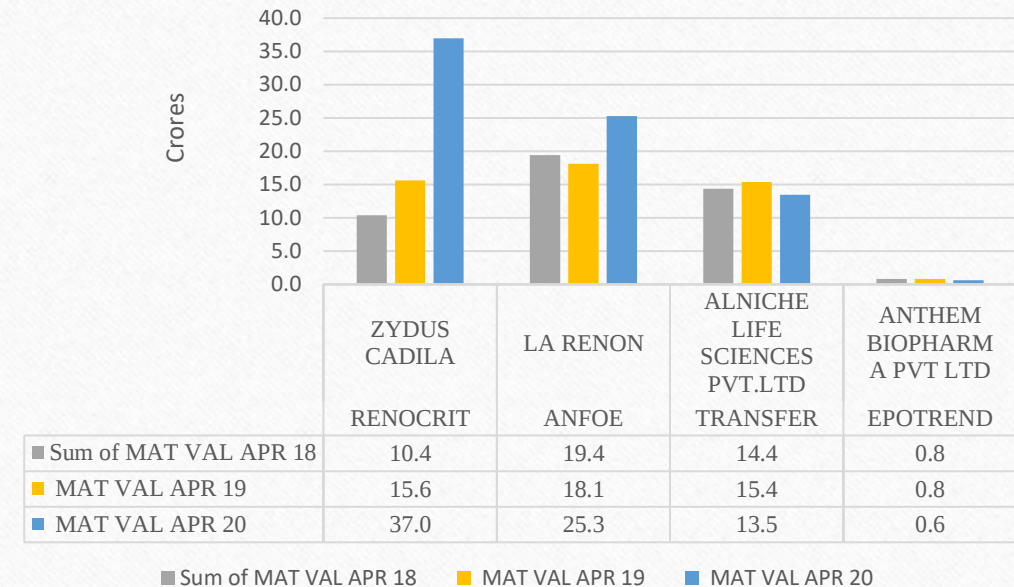


Figure: - The figure about the growth of the various brands in that Renocrit show progressive growth Anfoe is also in progressive growth phase.

Ferric carboxymaltose complex molecule

BRAND	COMPANY	MAT VAL GR APR 20	Market share
OROFER FCM	EMCURE PHARMACEUTICALS LTD	17.1	49%
FERIUM	EMCURE PHARMACEUTICALS LTD	5.3	13%
FERINJECT	LUPIN LTD	9.3	12%
ENCICARB	EMCURE PHARMACEUTICALS LTD	43.6	10%
REVOFER	LUPIN LTD	13.6	9%
FERIUM 1K	EMCURE PHARMACEUTICALS LTD	28.9	6%
LARINJECT	LA RENON	-13.6	1%
PALDELA	LA RENON	-25.0	0%

Table: - The table contain the various brands of the Ferric carboxymaltose complex molecule and their growth rate in 2020 and market share in which Emcure pharmaceutical having a maximum share of 49% and larinject of La renon having 1% market share in India.

Growth Trends of various brands of ferric carboxymaltose complex molecule in India

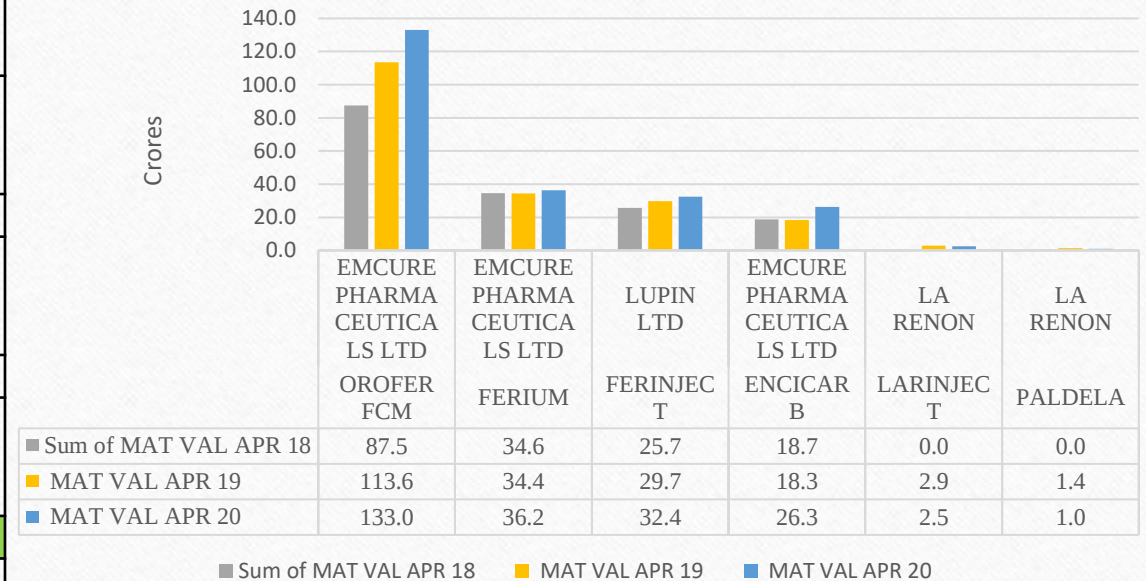


Figure : - The figure about the growth of the various brands in that Orofer FCM show progressive growth Ferium is also in progressive growth phase and Larinject is showing Progressive growth.

Renal Medicine

Sodium Bicarbonate molecule

BRAND	COMPANY	MAT VAL GR APR 20	Market share
SOBISIS	LA RENON	36.6	62%
NODOSIS	STEADFAST MEDISHIELD PVT LTD	41.5	16%
AUXISODA	ALNICHE LIFE SCIENCES PVT.LTD	44.9	7%
SODIUM BICARBONATE	TROIKAA PHARMACEUTICALS LTD	153.8	6%
SODAC	NEON LABORATORIES LTD	47.6	4%
NODOSIS GST	STEADFAST MEDISHIELD PVT LTD	574.4	1%
SODABICARB	SAMARTH LIFE SCIENCES PVT LTD	42.4	1%
AUXISODA EC	ALNICHE LIFE SCIENCES PVT.LTD	61.9	1%
DIOSIS	CMR LIFE SCIENCES	15.7	1%
SARPIX	AJANTA PHARMA LTD	53.3	0%
SOBISIS EC	LA RENON	1453.9	0%

Table: - The table contain the various brands of the sodium bicarbonate molecule and their growth rate in 2020 and market share in which La Renon having a maximum share.

Growth Trends of the Brands of sodium bicarbonate molecules in India

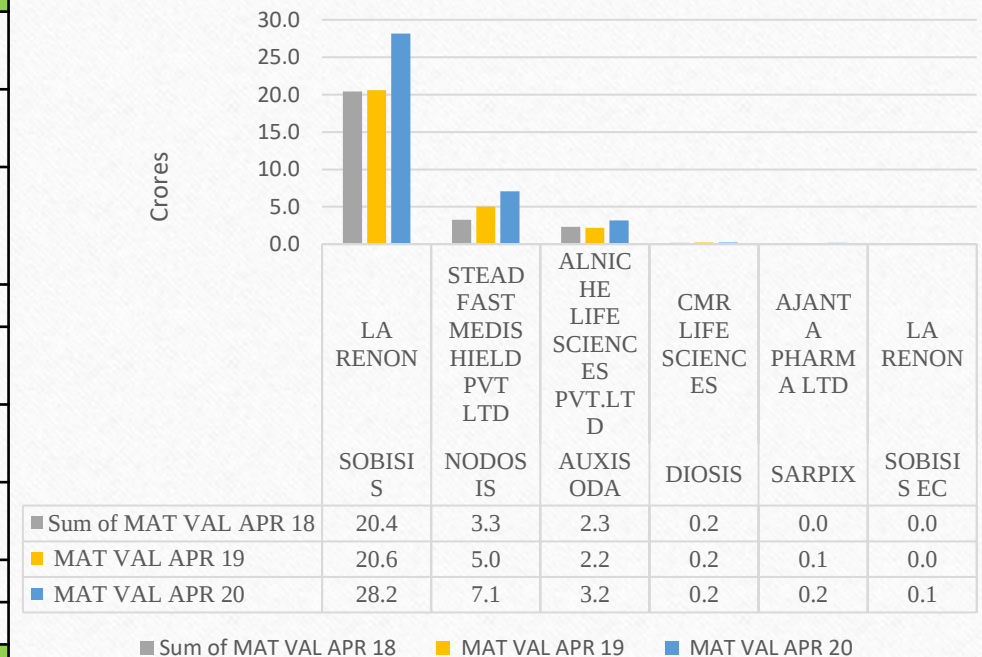


Figure: - The figure about the growth of the various brands in that Sobisis show progressive growth Nodosis is also in progressive growth phase and Auxisoda is showing Progressive growth.

Elemental Iron molecule

BRAND	COMPANY	MAT VAL GR APR 20	Market share
LUPIHEME	LUPIN LTD	2.1	59%
IMFERON	SHREYA LIFE SCIENCES PVT. LTD	16.9	14%
HAEM UP	CADILA PHARMACEUTICALS LTD	-20.5	10%
JECTOCOS	OAKNET HEALTHCARE	3.6	6%
SURBEX FE	ABBOTT HEALTHCARE PVT. LTD		4%
CITRAPHOS	LA RENON	15.8	2%
FERISE	INTAS PHARMACEUTICALS LTD	-16.2	1%
HAEMADAY	AKUMENTIS HEALTHCARE LTD	-6.5	1%
PHOSFOMIN IRON	ABBOTT HEALTHCARE PVT. LTD	-68.6	0%
ZEMCIFER	ZUVENTUS HEALTHCARE LTD	18.7	0%

Table: - The table contain the various brands of Elemental iron molecule and their growth rate in 2020 and market share in which Lupin having a maximum share and Larenon have 2% market share in India.

Growth Trend of various Brands of Elemental Iron molecule in India

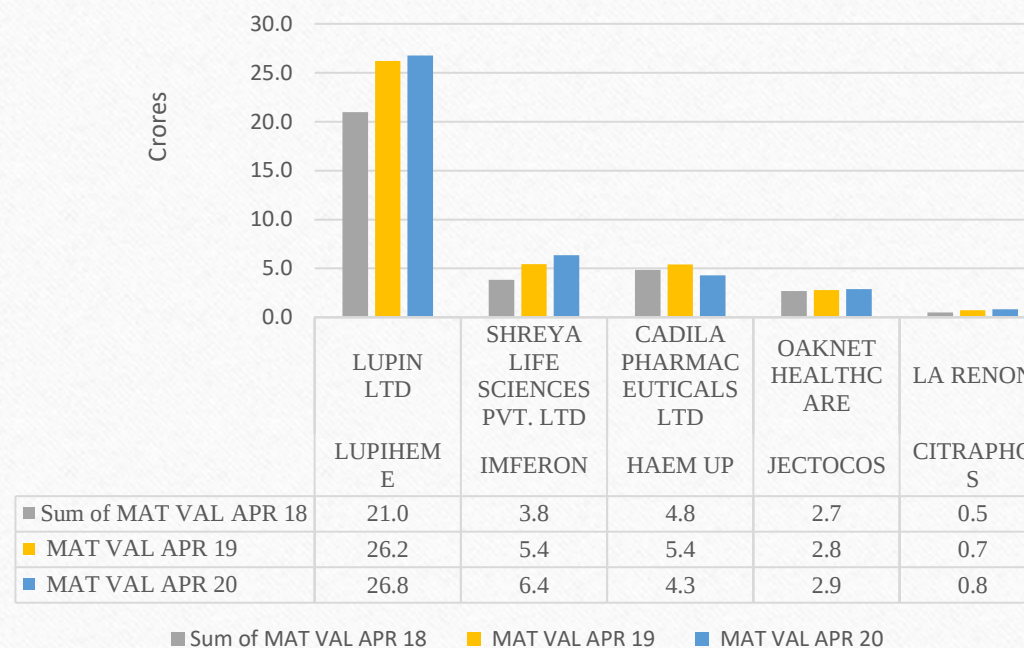


Figure: - The figure about the growth of the various brands in that Lupiheme show progressive in growth Imferon is also in progressive growth phase and Citraphos is showing progressive growth.

Transplant medicines

Market potential of Transplant Medicine in India

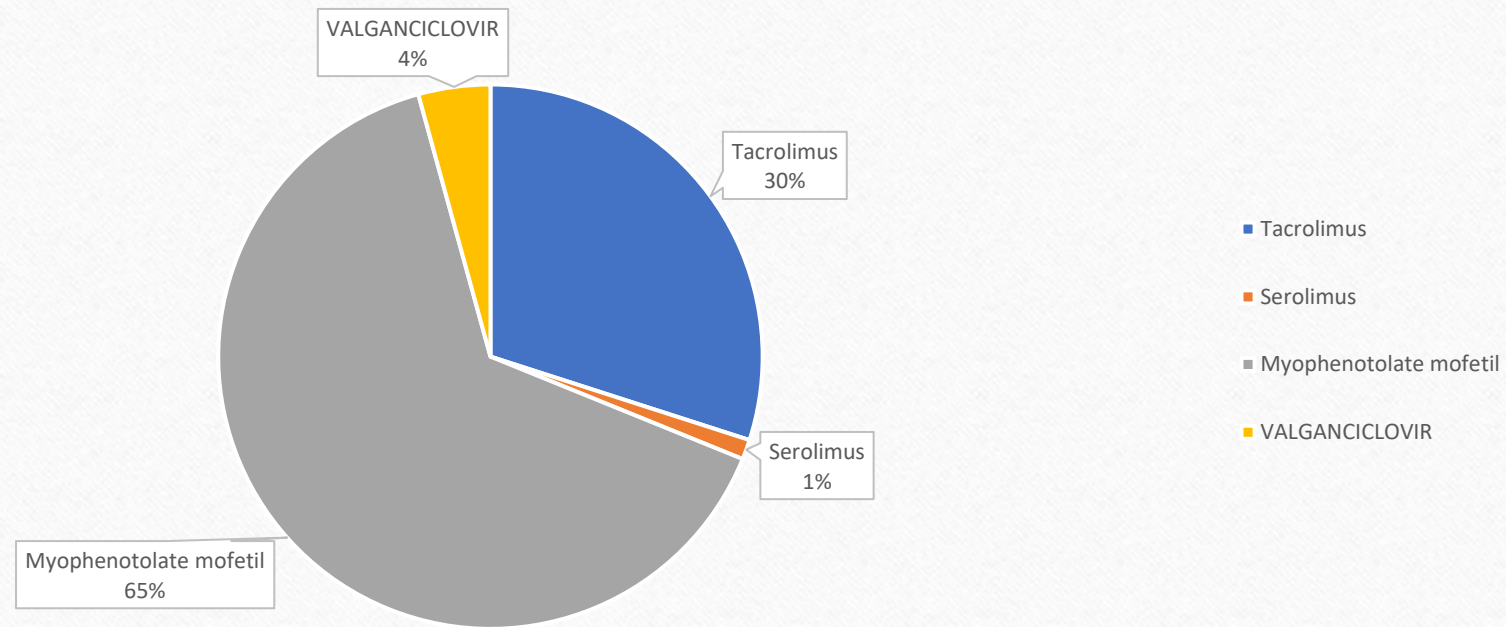


Figure 35: - The figure shows the market share acquired by the various molecules in transplant medicine in India.

Tacrolimus molecule

BRAND	COMPANY	MAT VAL GR APR 20	Market share
PANGRAF	PANACEA BIOTEC LTD	-5.1	52%
VINGRAF	EMCURE PHARMACEUTICALS LTD	227.1	12%
TACROMUS	ZYDUS CADILA	42.2	12%
TACROGRA F	BIOCON LTD	3.6	10%
TACROREN	LA RENON	67.5	7%
TAKFA	INTAS PHARMACEUTICALS LTD	11.1	2%
BIOMUS	ALNICHE LIFE SCIENCES PVT.LTD	164.1	1%
MYLIMUS	MYLAN	1434.6	1%
TACLORAN	WOCKHARDT LTD	-51.7	1%
IMUNOTAC	RPG LIFE SCIENCES LTD.	142.2	1%

Table: - The table contain the various brands Tacrolimus molecule and their growth rate in 2020 and market share in which Panacea biotech having a maximum share and Larenon have 7% market share in India.

Growth Trend of various brand of Tacrolimus molecule in India

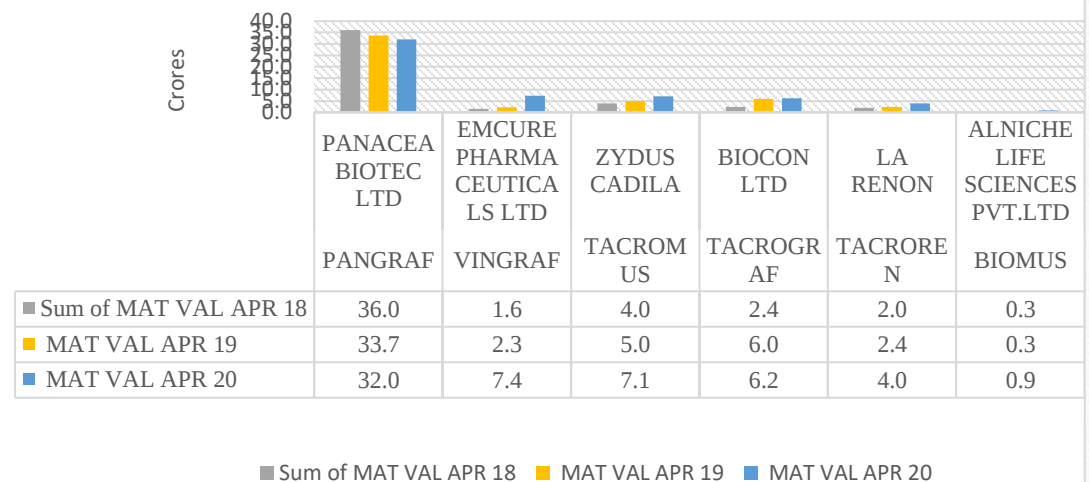


Figure: - The figure about the growth of the various brands in that Pangraf show progressive in growth Vingraf is also in progressive phase and Tacroren is showing progressive growth.

Sirolimus molecule

BRAND	COMPANY	MAT VAL GR APR 20	Market share
SIROMUS	ZYDUS CADILA	4.0	35%
RAPACAN	BIOCON LTD	-47.8	25%
ROCAS	EMCURE PHARMACEUTICALS LTD	-32.4	15%
SIROVA	INTAS PHARMACEUTICALS LTD	10.8	10%
RAPAREN	LA RENON	2480.9	9%
RAPASIM	ALNICHE LIFE SCIENCES PVT.LTD	40.6	5%
SIROPAN	PANACEA BIOTEC LTD	-68.5	1%
EMTOR	EMCURE PHARMACEUTICALS LTD	0.0	0%

Table : - The table contain the various brands Sirolimus molecule and their growth rate in 2020 and market share in which Zydus cadila having a maximum share and Larenon have 9% market share in India.

Growth Trend of various Brands of Sirolimus molecule in India

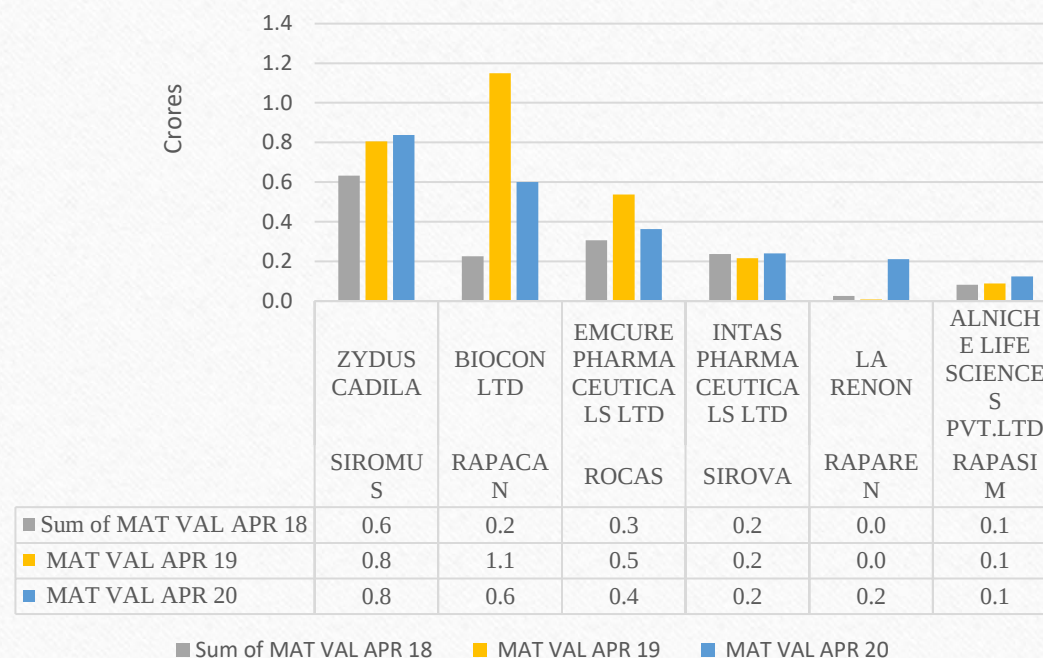


Figure : - The figure about the growth of the various brands in that Siromus show progressive in growth Rapacan shows fluctuating growth and Raparen is showing progressive growth.

Renal Nutrition Segment Analysis

Amino Acid standard solution

BRAND	COMPANY	MAT VAL GR APR 20	Market share
ALAMIN SN	ALBERT DAVID	13.0	26%
AMINOVEN	FRESENIUS KABI INDIA PVT LTD	8.3	16%
ASTYMIN	TABLETS INDIA LTD	3.7	14%
HERMIN	ALEMBIC LTD	-10.8	12%
AMINOWEL	FRESENIUS KABI INDIA PVT LTD	13.8	12%
LAMINO NEPHRO	LA RENON	36.0	7%
AMINOVEN INFANT	FRESENIUS KABI INDIA PVT LTD	-7.8	7%
ASTYMIN SN	TABLETS INDIA LTD	23.8	4%
COMBIKLAS	ALNICHE LIFE SCIENCES PVT.LTD		1%
LAMINO PLUS	LA RENON	33.6	1%

Table : - The table contain the various brands of Amino acid standard solutions molecule and their growth rate in 2020 and market share in which having a maximum share of Albert David in India and la renon having 7% market share in India.

Growth Trends of the various Brands of Amino acid standard solutions in India

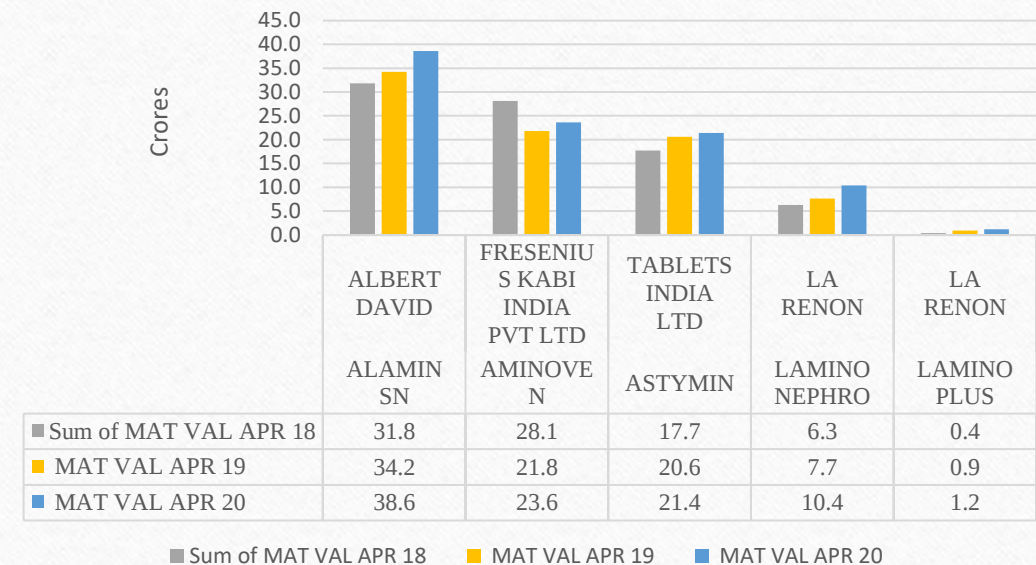


Figure : - The figure about the growth of the various brands in that Alamin show progressive growth Astymin shows progressive growth and Lamino is showing progressive growth.

Market Future trends and opportunities

- The new model systems include 3D bioprinting and organs-on-chips use to detect and prevent the Chronic kidney diseases
- One emerging treatment strategy is to target protein expression using antisense oligonucleotides (ASOs). These are short chains of nucleotides that bind to mRNA, thereby modulating protein expression.
- Use of Innovative product like Human Nephron Filter (HNF), Wearable Artificial Kidney (WAK) are encouraged.
- Xenotransplants are also used in future treatment of kidney diseases.
- There were huge opportunities for new drugs which work on the root cause of the progression of the Chronic kidney disease.
- Development of Biosimilars.
- Development of Cell Therapy based treatments.

Market strategy for the Renal Medicine - Renolog

Introduction

- In Chronic kidney patients while treating them with conservative therapy wide range of medicine used to decrease the progression of Chronic kidney disease.
- Among advanced Chronic Kidney Disease patients that followed Low protein Diet, Keto Analogue supplementation at an appropriate dosage which may substantially reduce the risk of initiating long-term dialysis. Keto Analogues supplementation represents an additional therapeutic strategy to slow the progression of CKD.

Product Detail

Mechanism of Action

Alpha Ketoanalogue belongs to a class of drugs called nutritional supplements. It follows same catabolic pathways as amino acids and works by improving the metabolism of protein in the body, thereby improving the renal function.

About the Product

Renolog Tablet - (10Tablet in a strip)

Price- Rs-374

Launch Date – January 2011

Product Specification

Renolog is a golden yellow pearl coated tablet containing a combination of 5 alpha keto amino acids.

Ingredients

Aka to isoleucine 67mg	L-lysine HCL 75mg
Aka to leucine 101mg	L-Histidine 38mg
Aka to Phenylalanine 68mg	L-Threonine 53mg
Aka to valine 86mg	L-Tryptophan 23mg
Aka methionine 59mg	L-Tyrosine 30mg
Total Nitrogen 36mg/tab	
Total Calcium 50mg/tab	

Indication - Chronic Kidney patient

Objective

To promote and establish that Alpha ketoanalogous has better results in treatment of Chronic kidney patients as compared to other traditional drugs.

To establish that use Alpha ketoanalogous will help to reduce economic burden and most economical as compared to any other treatment option.

To make and sustain Renolog as market leader.

Data Analysis

Q.1 Doctor how many patients of Chronic kidney disease is diagnosed in a day?

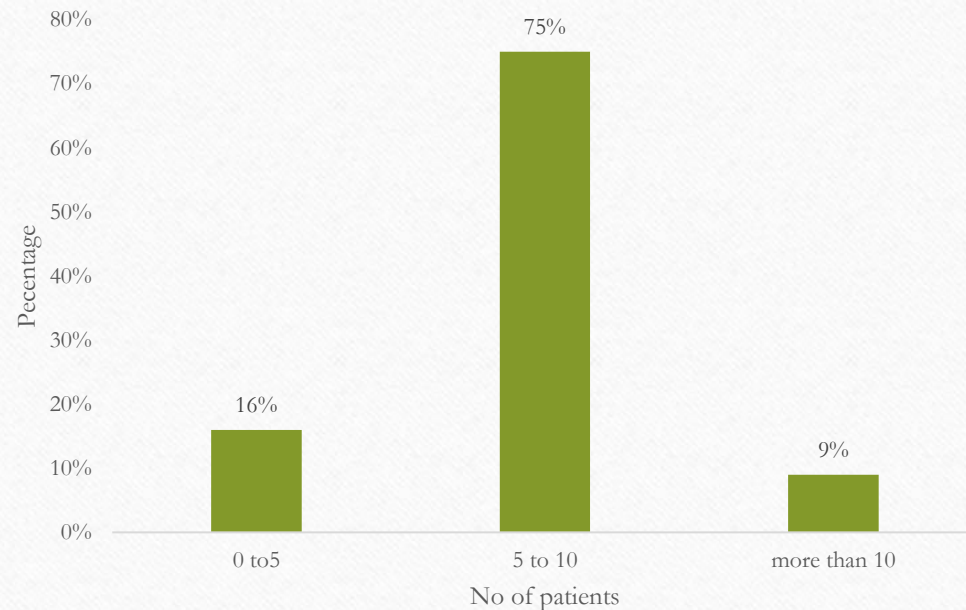


Figure : - The figure shows about 75% doctor diagnose 5-10 patient in a day followed by 16% doctors diagnose the 0 to 5 patient a day and only 9% doctor diagnose above 10 patients in a day.

Q.2 What are different type of conservative treatment you use for the management of Chronic kidney disease?

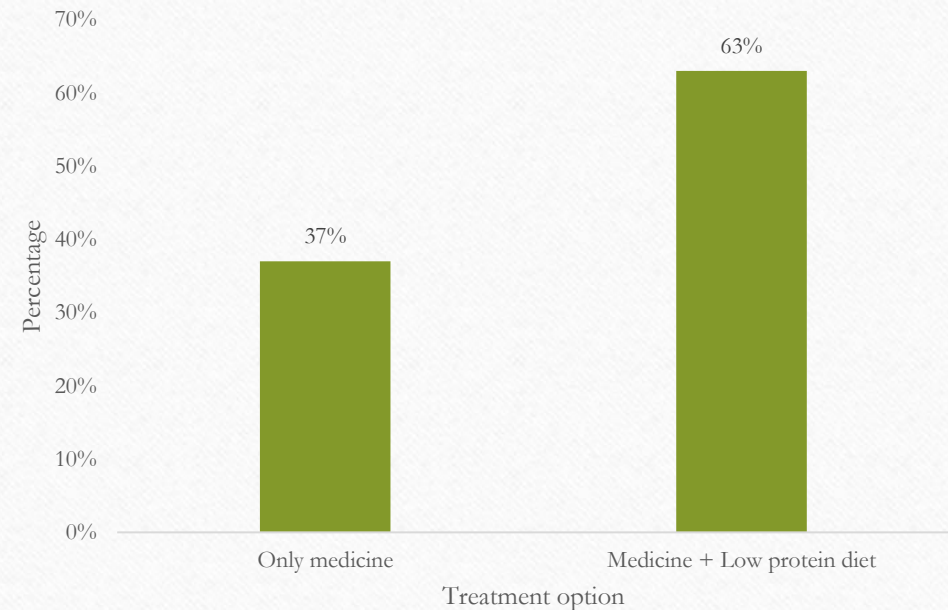


Figure : - The 63% doctors use Medicine + Low diet option in their treatment.

Q.3 Which type of medicine you prefer in the management to prevent the progression Chronic kidney disease along with low protein diet and also to maintain the health of patient?

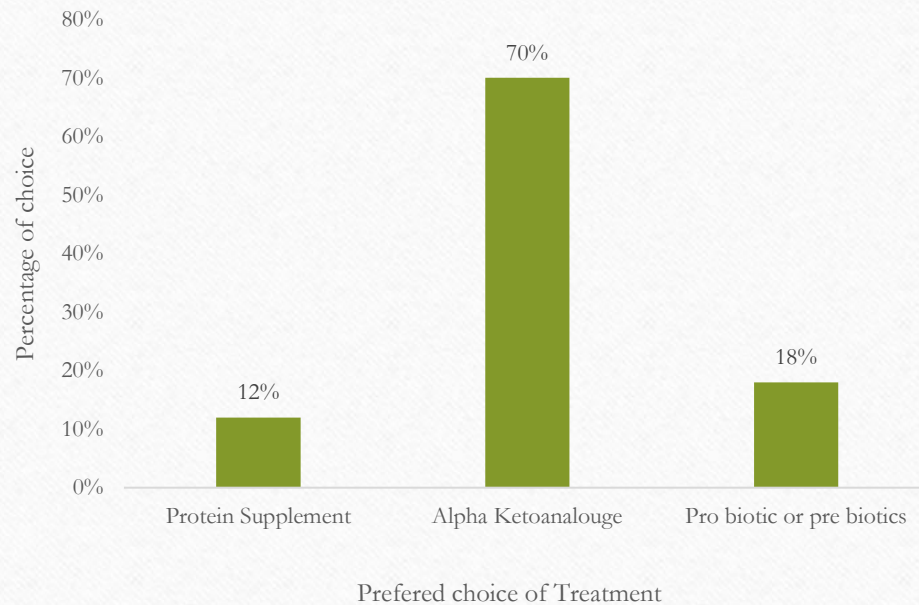


Figure: - The 70% doctors use Alpha ketoanalogue in their treatment.

Q.4 Which Brand do you Prefer most among Alpha ketoanalogue?

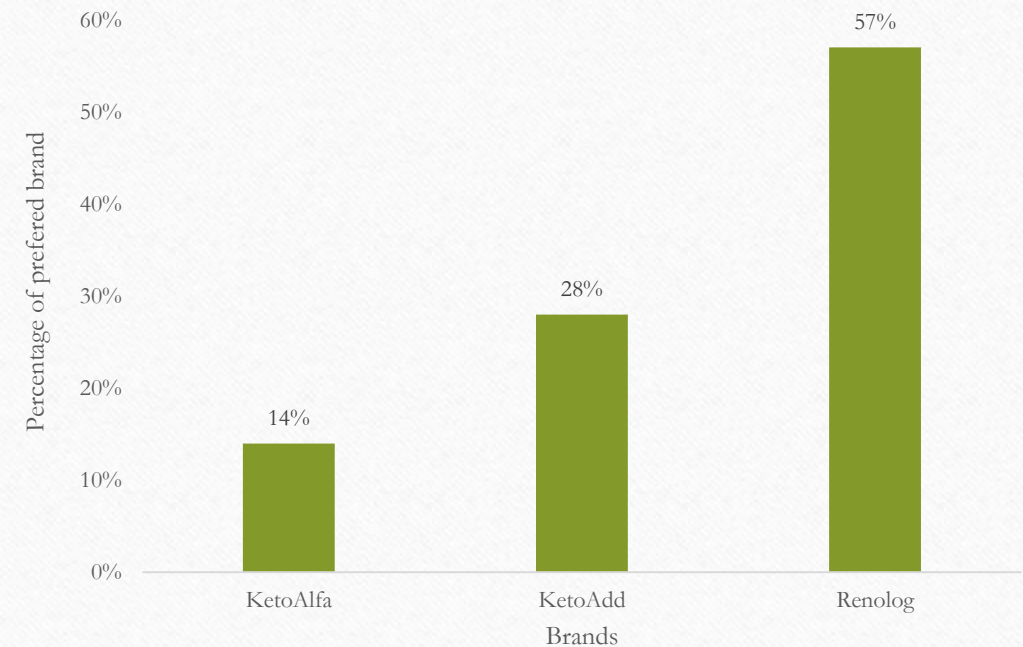


Figure 53: - The doctors prefer 57% Renolog Brand followed by 28% ketoadd brand and 14% ketoAlfa brand Alpha ketoanalogue in their treatment.

Q.5 Are you satisfied by current option of treatment?

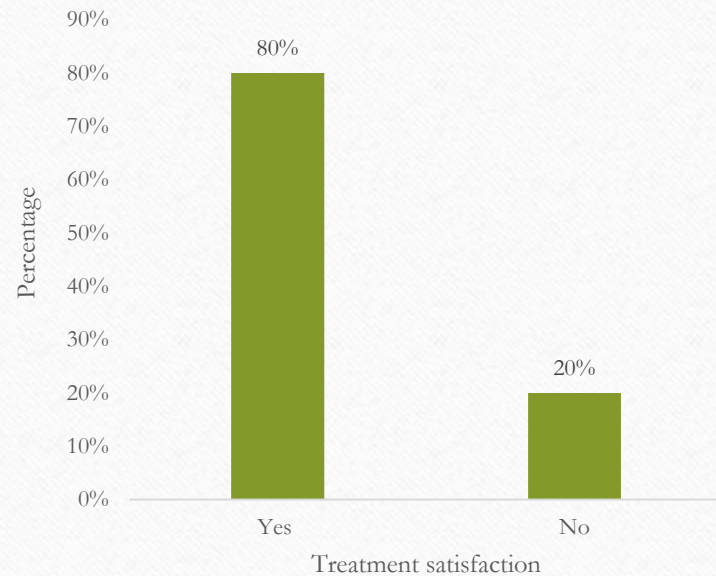


Figure : - The figure shows that 80% doctors are satisfied with the treatment.

Q.6 Would the use of Alpha keto analogue helped in decrease the frequency of dialysis and delayed the progression of Chronic kidney diseases.

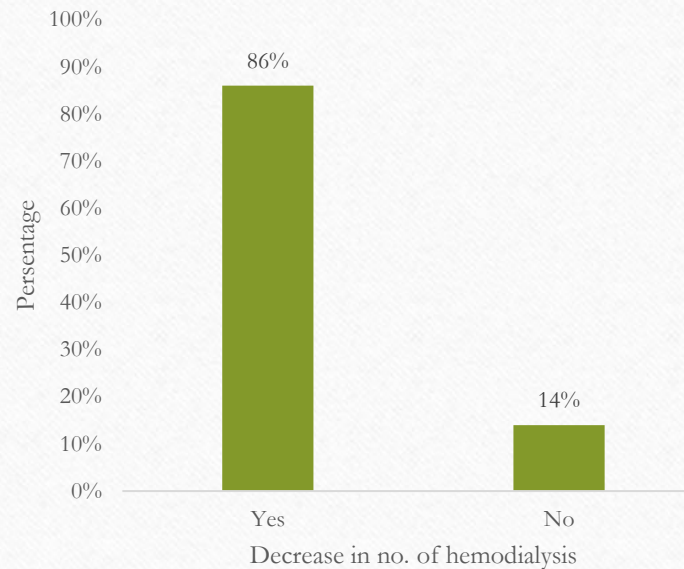


Figure : - The figure shows 86% doctors says yes it will reduce the cost of treatment and result as economical for patients.

Q.7 Would you like to continues the use of Alpha ketoanaloue in your treatments?

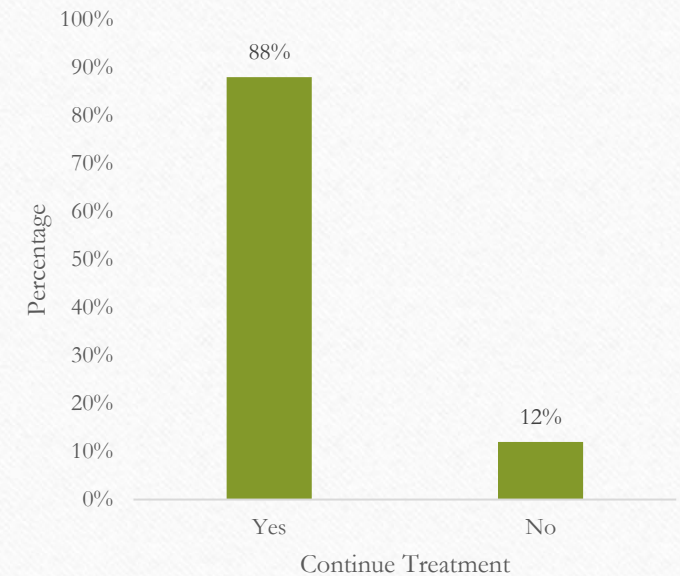


Figure : - The 88% doctors use Alpha ketoanaloue in their treatment.

Competitor Analysis

BRAND	COMPANY	MAT VAL GR APR 20	Market share
RENOLOG	LA RENON	26.9	57%
KETOADD	SUN PHARMA LABORATORIES LTD.	30.3	22%
KETOALFA	ALNICHE LIFE SCIENCES PVT.LTD	-27.4	11%
RENOALFA	ALNICHE LIFE SCIENCES PVT.LTD	55.8	4%
IMPULOG	LA RENON	4843.2	2%
APLAZAR	STEADFAST MEDISHIELD PVT LTD	100.9	2%
RENHOLD	PANACEA BIOTEC LTD	-62.1	1%
RENCHEK	INTAS PHARMACEUTICALS LTD	-27.2	1%
KETOHUNT	ANTHEM BIOPHARMA PVT LTD	83.2	1%
KETOFIX	EMCURE PHARMACEUTICALS LTD	374.8	0%

Table : - The table contain the various brands of Alpha ketoanalogue with essential amino acids the molecule and their growth rate in 2020 and market share in which La Renon having a maximum share.

Market share of various brands of Alpha ketoanalogue with Essential amino acid molecules in India

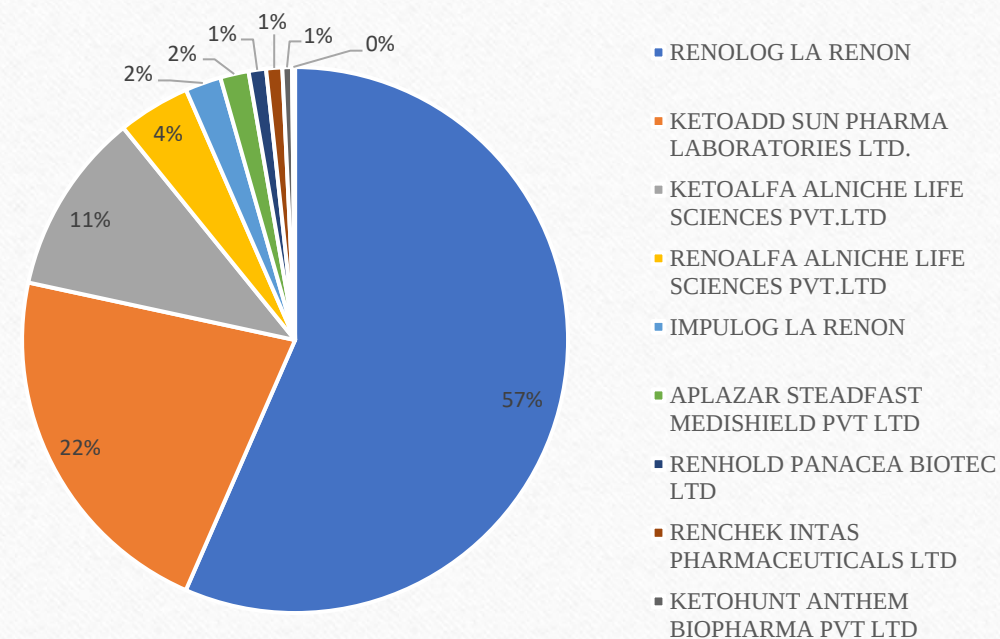


Figure: - The figure shows market share of different brands of Alpha ketoanalogue molecule in India Renolog brand of La renon having maximum share 57% followed by the Ketoadd brand of having 22% market share in India.

Growth Trends of various brands of Alpha ketoanalogues and Essential amino acids molecules in India

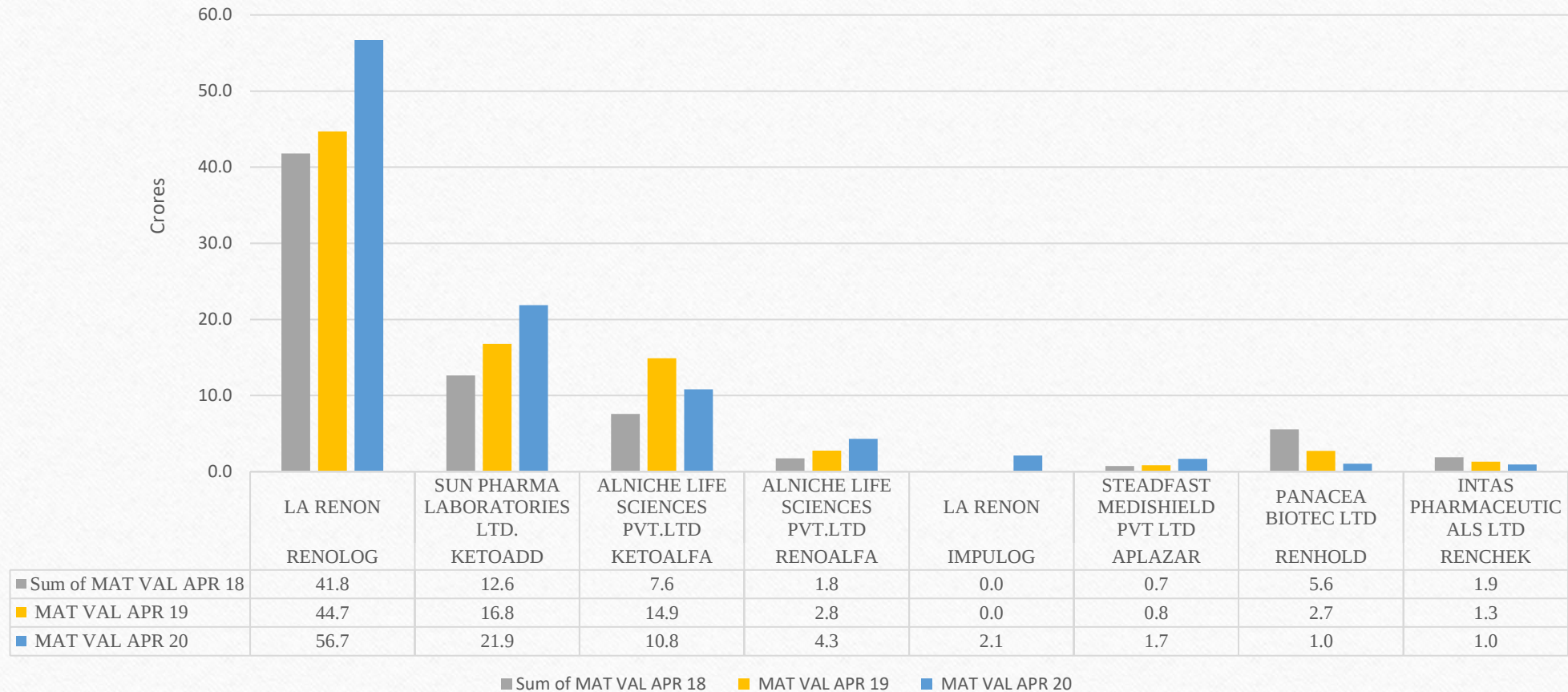


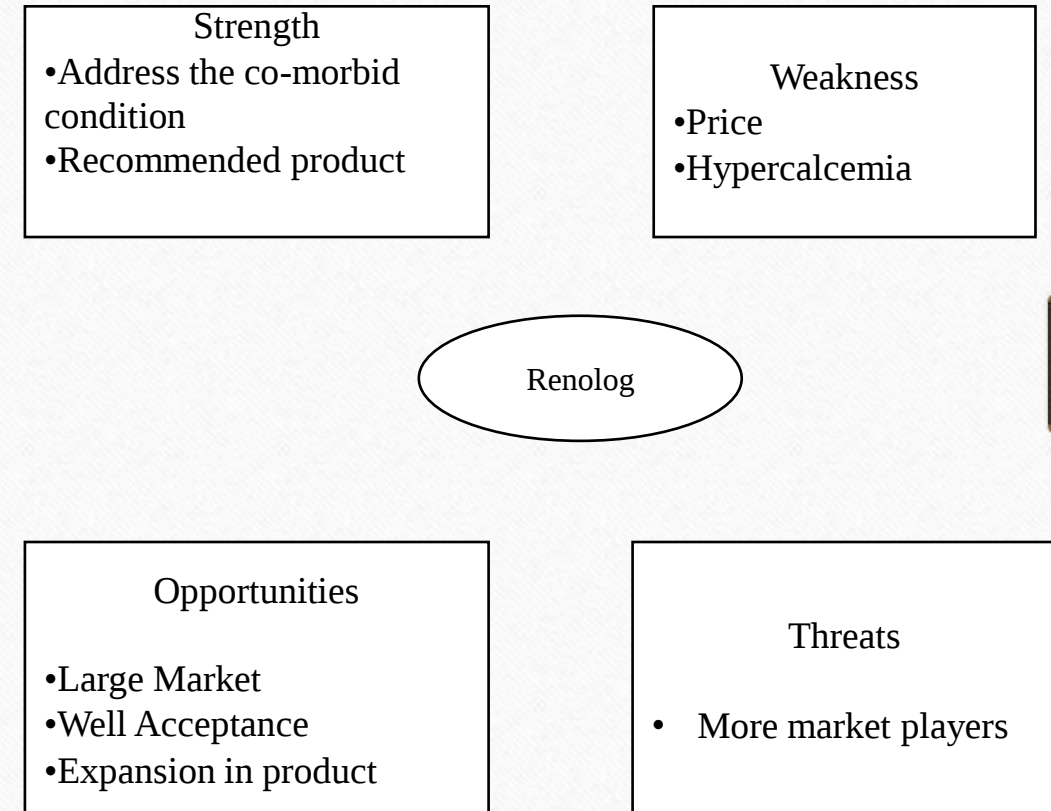
Figure 58: - The figure about the growth of the various brands in that Renolog show progressive growth ketoadd is also in progressive growth phase and Ketoalfa is showing Fluctuating growth.

Communication Task

- ❖ Target Audience: Nephrologist and Nephrophysician
- ❖ Desired Behaviour: Use Renolog in management to prevent the Chronic Kidney diseases

Consumer Behaviour	Desired Behaviour
Haemodialysis is mostly followed	Establishing the use of Alpha ketoanalouges is more economical and reduces the cost of therapy
Only low diet	Establishing the use of Alpha ketoanalouges help in the delaying Kidney problem

SWOT Analysis



Suggestions

- Monthly meeting the doctors with the reference material and samples
- Round table meeting is conducted with the KOLs and well-known doctors at regular intervals and their suggestion should be taken up for the promotion of products.
- Providing the brand related schemes to doctors
- To distribute the pamphlets that shows normal exercise and information of healthy diet
- Provide scientific studies related article and information regularly to doctor
- Brand based activities like providing doctors customized inputs
- Digital videos of doctors of well-known in the segments is shown which contain message about product
- The product can be launched with the compounds like Nigella sativa oil which can more effective than present
- More use of technology and digital marketing will give more better result than present one.
- Use of digital platforms encouraged for the promotion of products where sales team member can't able to reach doctors.
- Give subscription of various medicine related journals to the doctors which help them to get updated about the product and help them to update knowledge.

Study the Role of Uremic Toxins in Progression of CKD and Market Potential of Products used for Elimination Uremic Toxins in India.

Introduction

- The uremic syndrome is attributed to the progressive retention of a large number of compounds which, under normal conditions, are excreted by healthy kidneys.
- Protein-bound toxins are involved not only in the progression of chronic kidney disease (CKD)

Classification of Uremic Toxin

The uremic toxins can be classified according to their molecular weight (MW) and their protein-binding ability, the most convenient classification being

Molecules

- ❖ Small water- soluble compounds
- ❖ Protein- bound solutes
- ❖ Middle molecules

Role of various toxin progression in CKD

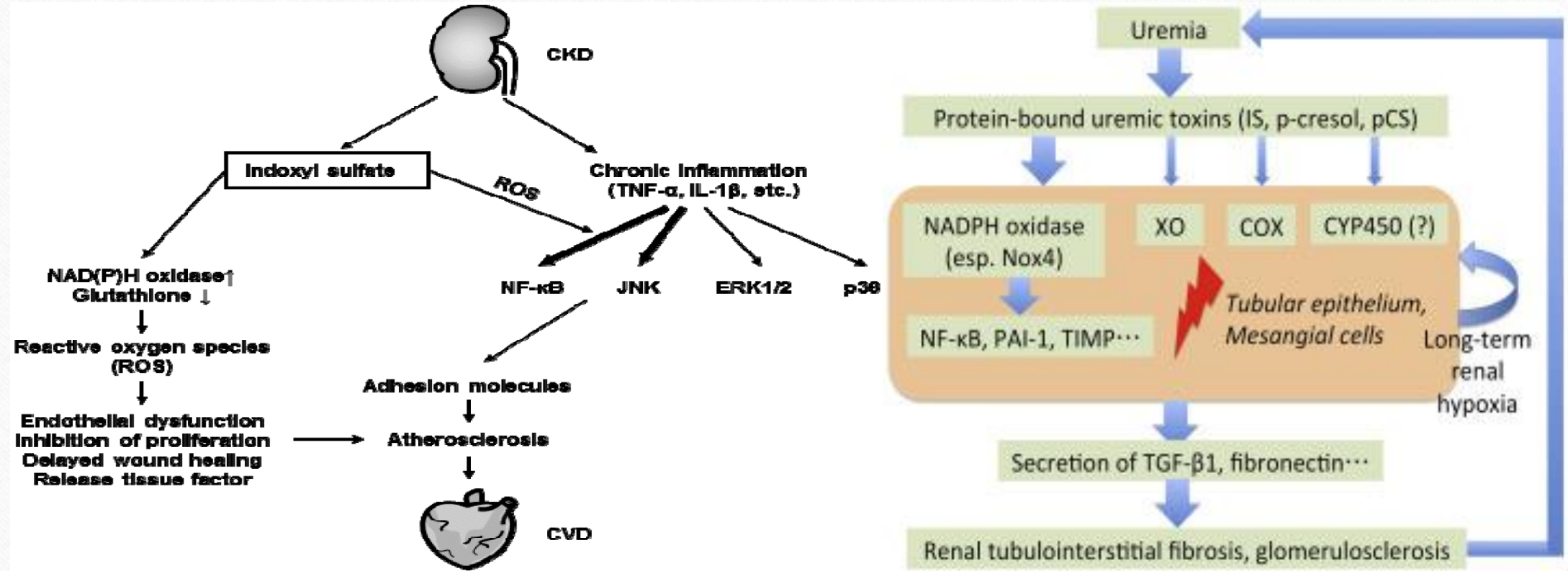


Figure : - This figure shows about the effect of uremic toxin in body

Treatment

The current treatment is mainly advised by the physicians is Haemodialysis but still the protein bound uremic toxin would remain in the body and accumulate to prevent this the doctors would advised for the conservative treatment such as

- Low protein diet
- AST 120
- Probiotic and pre biotics

Market potential of various drugs used to remove Uremic toxins

BRAND	COMPANY	MAT VAL GR APR 20	Market share
BIFILAC	TABLETS INDIA LTD	-1.4	13%
VIBACT	USV PVT LTD	5.2	9%
VSL 3	SUN PHARMA LABORATORIES LTD.	6.2	7%
LACTOGUT	STRIDES SHASUN LIMITED	8.8	5%
PROVIDAC	ZYDUS CADILA	-2.4	5%
LACTOVIT	STRIDES SHASUN LIMITED	-5.1	5%
CUDO	LA RENON	5.8	3%
VIZYLAC RICH	TORRENT PHARMACEUTICALS LTD.	1.9	3%
ENTROFLORA	MACLEODS PHARMACEUTICALS PVT.LTD	12.3	2%
VELGUT	ERIS LIFESCIENCES LTD	2.8	2%

Market share of various brands of Probiotic microbes in India

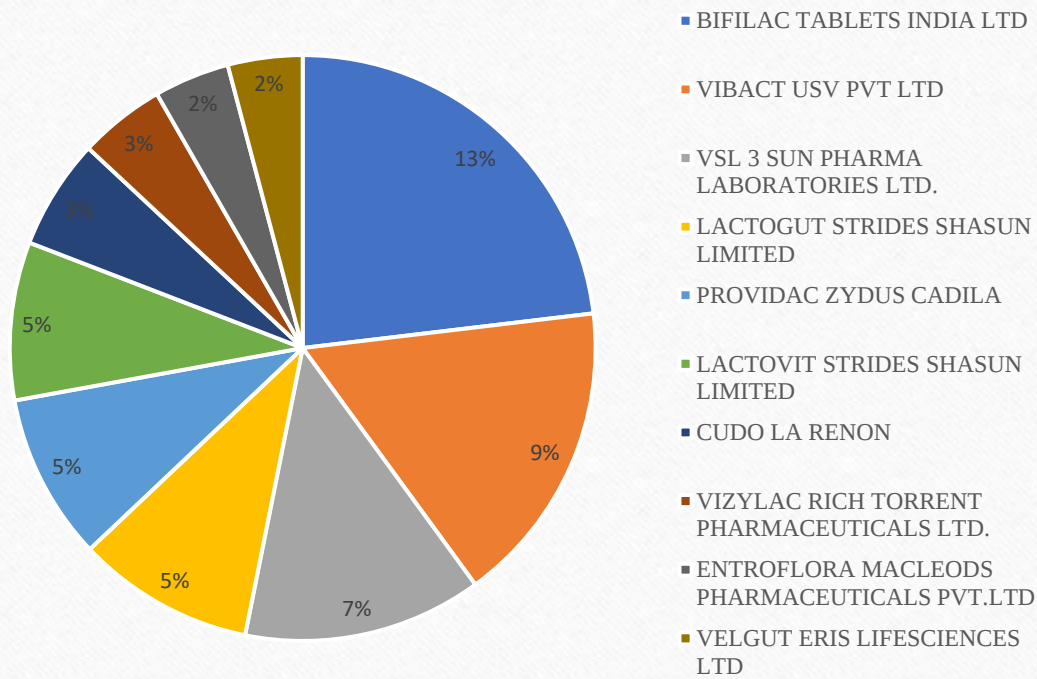


Figure: - The figure shows market share of different brands of Probiotic in that Bifilac brand of Tablet India having maximum share 13% followed by the Vibact brand of having 9% market share in India.

Growth of various brands of Probiotic microbes medicines in India

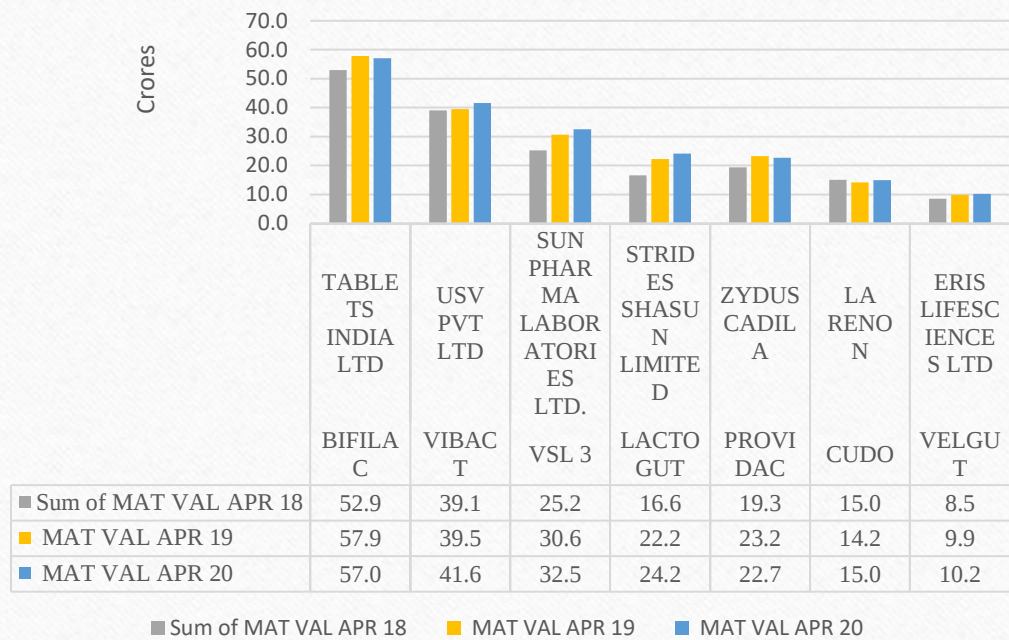


Figure: - The figure about the growth of the various brands in that Bifilac show progressive growth Vibact is also in progressive growth phase and Cudo forte is showing Fluctuating growth.

Limitation

- Major part of study done on information available on the secondary platforms such as government platforms such as government website, company website, company annual report, press release media broadcast.
- Conflicting data are available.
- Many products are used in multiple indication, so considered in study for one indication.

Suggestions

- In Haemodialysis category some brands are like Serocit, Qron, Larinject is showing slow growth if we also focus on these brands will all contribute in increasing the revenue of company.
- In renal medicine segment some brands like Citrophos is also have huge potential can be focus on this brand also mad it may also contribute in increasing revenue in it.
- The transplant medicine is also having huge potential and having wide market.
- The development of the Biosmilars in renal medicine will provide addon effect on caputuring more market share of nephrology segment in India.
- The marketing activities should be focused on the negative growth brands such activities include
 - Round table meeting is conducted with the KOLs and well-known doctors at regular intervals and their suggestion should be taken up for the promotion of products.
 - Providing the brand related schemes to doctors
 - To distribute the pamphlets that shows normal exercise and information of healthy diet
 - Provide scientific studies related article and information regularly to doctor
 - Brand based activities like providing doctors customized inputs
 - Digital videos of doctors of well-known in the segments is shown which contain message about product. Use of digital platforms encouraged for the promotion of products where sales team member can't able to reach doctors.

References

- <https://www.medlife.com/order> Accessed on 26 -04-2020
- <https://hhbc.in/nephrology-market-scenario-of-india> Accessed on 25-04-2020
- <https://www.kidneyfund.org/kidney-disease/chronic-kidney-disease-ckd/> Acsessed on 29-04-2020
- Anna j dare (2016) Renal failure deaths and their risk factors in India 2001–13: nationally representative estimates from the Million Death Study. Available from
<https://www.sciencedirect.com/science/article/pii/S2214109X16303084>
- Chih-wei-yang(et al)(2019) Global case studies for chronic kidney disease/end-stage kidney disease care .Available from
<https://www.sciencedirect.com/science/article/pii/S2157171619300243>
- <https://www.mayoclinic.org/diseases-conditions/chronic-kidney-disease/diagnosis-treatment/drc-20354527> Assessed on 02-05-2020.
- Scott Maier (2019) Chronic Kidney Disease Patients Face Continual, Significant Gaps in Care. Available From
<https://www.ucsf.edu/news/2019/07/414891/chronic-kidney-disease-patients-face-continual-significant-gaps-care>
- Sri Lekha Tummalapalli (et al)(2019) Trends in Quality of Care for Patients with CKD in the United States .Available from
<https://cjasn.asnjournals.org/content/14/8/1142>

THANK YOU