TOTAL KNEE REPLACEMENT IN OSTEOARTHRITIS KNEE WITH VARUS DEFORMITY- A STUDY OF 30 CASES.

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ABSTRACT: Osteoarthritis causes a lot of physical and mental trauma to the patient because of pain and deformity. This disease is of even more concern in country like India with an oriental life style. This study was conducted to study the efficacy of TKR (Total Knee Replacement) in their management, after pharmacological methods have failed. The results were interpreted on the basis of Knee Society Scoring system as well as Functional scoring.

The present study was carried out in Department of Orthopedics, Rajindra Hospital Patiala. This study comprised of 30 patients with osteoarthritic knee with varus deformity and their results after TKR.

KEY WORDS: osteoarthritis, TKR, varus deformity

INTRODUCTION: The advent of total knee arthroplasty in the treatment of arthritis knee has been a boon for the patients who live a miserable life due to pain, infirmity and deformity caused by arthritis, osteoarthritis being most common form of arthritis. Total knee arthroplasty is one of the most successful procedures in orthopaedic surgery today. The indications of TKR are well defined and universally accepted; subsequently the results have been uniformly excellent.

INDICATIONS OF TOTAL KNEE REPLACEMENT IN OSTEOARTHRITIS A. SYMPTOMS AND SIGNS

(i) **PAIN:** The ideal candidate for surgery has moderate to severe knee pain that will be present during routine daily activities. The pain is chronic, often progressive, and is refractory to all nonsurgical modalities.

(ii) RANGE OF MOTION: Painful knee will usually lack range of motion. Patient will have both a block to full extension as well as restriction to full flexion. Although loss of motion alone is rarely an indication for knee replacement, the stiffness can be problematic especially in patients with arthritis in the adjacent joint of the lower extremities, for example in the hip joint.

(iii) **DEFORMITY:** Angular deformities such as genu varum or valgum associated with instability of the joint and pain in the ipsilateral hip or foot is also an indication of surgery.

(B) DISEASE PROCESS: The above mentioned triad of knee pain, stiffness and deformity can be seen in a variety of diseases: Osteoarthritis, Rheumatoid arthritis, Seronegative spondyloarthropathies, Post Traumatic Arthritis, Tumours.

CONTRAINDICATIONS TO TOTAL KNEE REPLACEMENT

1. INFECTION: Active sepsis is an absolute contraindication to performing a knee replacement. The introduction of prosthetic material into a septic knee almost assures an increase in the severity of the inflammatory process and an eventual progression into a chronic osteomyelitic process.

2. ABSENT QUADRICEPS FUNCTION: It is an absolute contraindication to total knee replacement surgery. Arthrodesis or bracing are much better alternatives.

3. ARTHRODESIS: Painless arthrodesis in a good functional position should not be converted to a total knee replacement. Likewise, the proper treatment for a pseudoarthrosis following an attempted knee fusion is re-arthrodesis, not knee replacement.

4. RELATIVE CONTRAINDICATION: To a total knee replacement is triad of youth, obesity and a job requiring heavy use of the leg. In assessing the patient's age, the physiological and not the chronological factor is important. Obese patients are at increased risk for peri-operative anaesthesia and vascular problems, intraoperative technical problems and postoperative prosthetic loosening.

AIMS AND OBJECTIVES

- 1. To evaluate role of Total knee arthroplasty in patients having genu varus deformity due to osteoarthritis.
- 2. To evaluate the benefit of Total knee arthroplasty to the patients in daily activities in oriental life style.
- 3. To evaluate fixation and alignment of prosthesis radiologically and to correlate it with clinical results of total knee arthroplasty.
- 4. Survival of prosthesis.

MATERIAL AND METHODS: The study was conducted on the patients suffering from tricompartmental degeneration of knees, having severe pain (even at rest), contractures, varus deformity and decreased range of motion and had no relief with other conservative modes of management.

The patients were taken up from orthopaedic opd and were operated at govt. medical college & rajindra hospital, patiala and were followed up thereafter in OPD.

The patients were evaluated pre-operatively and post-operatively according to the proforma. various prosthesis selected for replacements were ib-ii posterior stabilized prosthesis.

ASSESSMENT SYSTEM: This system of clinical rating is simple but more objective. The rating is divided into separate knee and patient function scores. Thus, increasing age or medical condition will not affect the full score. Hence dual rating system eliminates the problem of declining knee score associated with patient infirmity.

It is adopted from the knee Society, Hospital for Special Surgery, affiliated to the New York Hospital and Cornell University Medical College, New York.

CLINICAL RATING: The system as developed by the knee society is subdivided into knee score that rates only the knee joint itself and a functional score that rates the patients ability to walk and climb stairs. This dual rating system eliminates the problem of declining knee scores associated with patient's infirmity.

A. KNEE SCORE: IT INCLUDES ONLY THREE PARAMETERS.

(i) Pain (ii) Stability (iii) Range of motion.

Total score allotted is 100 splitted as: 50 points for pain, 25 for stability, 25 for range of motion. Deduction in the score is made by:

(i) Flexion contractures (ii)Extension lag (iii)Malalignment.

Thus 100 points will be obtained by a person with no pain, with full AP/ML stability and range of motion of 125°

B. FUNCTIONAL PARAMETER: IT INCLUDES ONLY

(i) Walking distance (ii)Stair climbing

Total score allotted for functional parameter is also 100 where 50 points are given for walking distance (app 100 m) and 50 points for stair climbing (normal if patient can ascend and descent stair without holding a railing). Deductions in functional parameters are for walking aids. The proforma attached along with are self explanatory.

The knee assessment and functional parameters are then graded as:

Excellent (85-100), Good (70-84), Fair (60-69), Poor (Less than 60)

OBSERVATIONS:

Patients were divided into three groups depending on age. The age groups were 50-59 years, 60-69 years and over 70 years. The assessment of results was on the basis of Knee Society Scoring System. The results were graded as excellent, good, fair and poor. During study the observations were as follows.

Duration (in Years)	Male	Female	Total
0-3	01	01	02
4-6	10	00	10
7-9	02	04	06
10 and above	07	05	12
Total	20	10	30

Table 1: duration of disease

In our study maximum no of cases, 12 in total, were operated after duration of disease was over 10 years, followed by 10 cases in the group 4-6 years duration. This was followed by 6 cases with duration of disease 7-9 years. 2 cases came for TKR within 3 years of appearance of symptoms.

Duration	Re	sul	ts		Total cases
(in Years)	Р	F	G	Ε	10tal cases
0-3	0	0	0	2	02
4-6	0	0	1	9	10
7-9	0	0	1	5	06
10 and above	0	2	3	7	12
Total	0	2	5	23	30

Table 2: relationship between duration of disease and result of tkr

Of the two cases with duration of disease less than 3 Years both of them manifested excellent results, among the 10 cases with duration of disease 4-6 Years, there was 1 good and 9 excellent results. 5 patients had excellent and 1 good result in patients with duration of disease 7-9 Years. In 12 patients with duration of disease above 10 Years, there were 7 excellent, 3 good and 2 fair results.

In our study in the age group of 50-59 years there were 3 patients with normal quadriceps function, 1 case with weak quadriceps and none of the cases in this age group had wasting of quadriceps. In the age group 60-69 years, these numbers were 7, 6, and 1 respectively. The corresponding numbers in the age group 70 years and above were 4, 6 and 2. In total there were 14 cases with normal, 13 cases with weak and 3 cases with wasted quadriceps.

		-			
Quadriceps Status	Poor	Fair	Good	Excellent	Total
Normal	00	00	00	14	14
Weak	00	01	04	08	13
Wasted	00	01	01	01	03
Total	00	02	05	23	30

Table 3: correlation of results of tkr and quadriceps status

Among the 14 patients having good quadriceps function 13 patients had excellent and 2 patients had good results. Out of 13 patients with weak quadriceps, one patient had fair, 3 had good and 9 cases had excellent results. In comparison the 3 cases with wasting of quadriceps exhibited 1 each fair, good and excellent result.

Table 4: weight distribution

Age Group (in Years)	Normal	Overweight	Obese	Total
50-59	02	02	00	04
69-69	06	06	02	14
70 and above	08	04	00	12
Total	16	12	02	30

In our present study only 2 patients were obese, 12 were overweight and the remaining was normal in weight. The 2 cases that were obese belonged to the age group of 60-69 Years.

Weight	Poor	Fair	Good	Excellent	Total
Normal	0	0	1	15	16
Overweight	0	1	3	08	12
Obese	0	1	1	00	02
Total	0	2	5	23	30

Table 5: correlation of weight and result of tkr

Among the patients with normal weight there were 15 cases with excellent result, 1 with good result. Out of the 12 cases that were overweight, the results were 8 excellent, 3 good and 1 fair.

Table 6: pre operative knee grading

Age Group	Mal	le			Fen	nale	j		Tot	al		
(in years)	Р	F	G	Ε	Р	F	G	Ε	Р	F	G	Ε
50-59	3	0	0	0	1	0	0	0	4	0	0	0
60-69	9	0	0	0	5	0	0	0	14	0	0	0
70 and above	8	0	0	0	4	0	0	0	12	0	0	0
Total	20	0	0	0	10	0	0	0	30	0	0	0

In the present study there were 3 males and 1 female in the age group 50-59 year, 9 males and 5 females in the age group of 60-69 Years, 8 males and 4 females in the age group 70 Years and above, all of them having poor grade according to knee scoring system.

Age Group	Ma	ale			Fe	ma	le		To	tal		
(in years)	Р	F	G	Ε	Р	F	G	Ε	Р	F	G	Ε
50-59	0	0	1	2	0	0	0	1	0	0	1	3
60-69	0	1	1	8	0	0	1	4	0	1	2	12
70 and above	0	0	1	6	0	1	1	2	0	1	2	8
Total	0	1	3	16	0	1	2	7	0	2	5	23

Table 7: post operative knee grading

As is evident from the above table in the age group of 50-59 years there were excellent results in 2 males and 1 female, good result in 1 male. There were no fair or poor results in this age group. In the age group 60-69 years, among the 10 males there were 8 excellent, 1 good and 1 fair result, out of the 5 females there were 4 excellent and 1 good results i.e. in total there were 12 excellent, 2 good and 1 fair result. In the age group 70 years and above out of 7 males there were 6 excellent and 1 good result and among 4 females there were 2 excellent, 1 fair and 1 good result i.e in total there were 8 excellent, 2 good and 1 fair result. So to conclude there were 23 excellent, 5 good and 2 fair results with no poor result in our study.

DISCUSSION: Osteoarthritis is a leading cause of morbidity in elderly. This renders them sedentary and dependent upon others. TKR has emerged as an effective treatment option in osteoarthritis knee when all other measures have failed.

1. OBESITY: Spicer & Pomeroy et al published a study in August 2001 in which they studied the correlation of obesity (BMI) and outcome of TKR. They found that obese patients had an improvement in knee score by 41.9 points as compared to 43.7 points in normal weight person. They also found that review arthroplasty was required more often in obese patients. Changulani et al found that the average age at which patients underwent TKR was much higher in patients with normal weight as compared to their obese counter-parts. The criteria they chose for obesity was also BMI.

The findings of present study also corroborate the above mentioned studies. Considering BMI < 25 as normal, the mean age at which these patients underwent TKR was 69 Years and in patients with BMI > 25 this age was 63 Years. In the only 2 obese cases (BMI > 30) there was 1 fair and 1 good result hence, the in tandem with the above studies.

2. QUADRICEPS STATUS: Mizner, 2005 carried out a study in which he observed the outcome after TKR surgery and preoperative quadriceps strength and he found these variables to be proportionate to each other i.e. better functional outcomes after TKR surgery and better quadriceps strength preoperatively.

In our study, the 14 cases that had normal quadriceps strength preoperatively all of them had excellent results whereas when quadriceps was weak or wasted the results were not as good.

3. ALIGNMENT: Hvid and Nielsen carried out a study and published in 1984 and observed that there were radiolucencies in the knees of the patients in whom there was varus alignment of the knee. They observed inconsistent success in achieving the desired 2-12° of valgus. Kjaersgaard–Anderson et al 1989 also noticed loosing of prosthesis consequent to varus implantation of the tibial component.

In present study out of the total 30 cases we were able to achieve the physiological values of $2-12^{\circ}$ in the 27 cases. No cases were observed with tibial or femoral component loosing.

4. OVERALL SUCCESS RATE: The original review in the first consecutive 220 arthroplasties was published by Insall et al in 1986 and they reported 137 (62%) excellent, 61 (287%) Good, 10 (4.5%), Fair and 12 (5.5%) poor results with a follow up of 3-5 Years in total Condylar prosthesis. In a similar study carried out by Vince and Colleagues in 1988 revealed 79.2% excellent, 16.7% good & 4.2 % poor results. Scuderi et al in 1989 carried out a study in which there was 97.3% success rate. Failures included two loose tibial components one tibial stress. There were six infections as well there were no tibial components loosing or infection in the present study carried.

In the present study the follow up was done once and the results were 77% excellent, 17% good, 6% fair and no poor results.

5. COMPLICATIONS:

1. PATELLAR COMPLICATIONS: Sneppen and Colleagues (1985) noticed no patellar dislocation or fracture patella but there was moderate residual pain in 12 knees at one year follow-up. Kjaersgaard and Anderson et al, 1989 noticed a case of patellar fracture in their study of 103 osteoarthritic patients that underwent TKR. Aglietti and Buzzi (1988) published a follow-up study

in which there were no stress fractures but their average flexion was very modest (98°) which is less than average and this is what, they proposed has protected patella.

In present study, there were no patellar complications and the range of flexion was also 106.50.

2. INFECTION: Kjaersgaard and Anderson et al, 1989 reported 3 deep infections consequently poor results out of 103 knees that were operated i.e. infection rate was 3%. In present study, there was no case of deep infection, presumably due to strict asepsis and antibiotics.

CONCLUSION: Maximum number of cases belonged to the age group of 60-69 Years, males turned up more for surgery in the ratio of 2:1.The duration of disease, thus can be concluded adversely affects the outcome after surgery. There were over 90% acceptable results in patients with normal or weak quadriceps and in patients in whom wasting was present there were 67% acceptable results. Nothing can be said conclusively because of the small sample size in the group with wasted quadriceps. Though this data does not conclusively suggest about the prognosis of TKR after obesity but the age of the patients which required TKR was less in overweight and obese patients as compared to patients with normal weight and this was evident as average age of patient undergoing TKR with normal weight was 67 Years as compared to 63 Years in overweight and obese patients. There was varus deformity in all the cases, which was corrected and physiological varus was achieved in 90% of the cases. Range of motion is considerably increased from a preoperative mean of 77° to a postoperative 105°. It can thus be concluded from the present study that TKR provides an unparalleled improvement in the disease symptomatology, deformity correction, stability and life style in the patients suffering from osteoarthritis. In India where people have an oriental life style, this is possibly the best treatment for knee osteoarthritis.

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PRE-OPERATIVE ASSESSMENT:

					STAB	ILITY									KNEE	scoi	RING			FU	NCTIO	NAL S	CORING	3
S. No.	Name	FFD	FF	ROM	AP	ML	Alignment Varus	Walking	Stairs	Walking Aids	Pain	ROM	Stab	oility	Flex. Cont.	Ext. Lag	Alignment Varus	Total Score	Knee Grade	Walking	Stairs	Ded.	Total Score	Knee Grade
													AP	ML		8								
1	HR	25	90	65	<5	<15	20	С	С	CANE	10	13	10	00	15	-	20	00	Р	30	30	05	55	Р
2	AS	05	105	100	<5	<15	10	С	D	-	30	20	10	00	02	-	00	58	Р	30	15	00	45	Р
3	MS	20	110	90	<10	<10	15	D	С	-	30	18	05	10	10	-	15	38	Р	20	20	00	40	Р
4	RS	10	110	100	<15	<10	10	С	С	-	20	20	00	05	05	-	00	40	Р	30	30	00	60	F
5	MS	10	120	110	<10	<10	10	D	D	-	10	22	05	10	05	-	00	42	Р	20	15	00	35	Р
6	SD	45	80	35	<5	<5	20	F	Е	-	00	07	10	15	15	-	20	00	Р	00	00	00	00	Р
7	HR	25	95	70	<5	<5	15	С	С	CANE	10	15	10	15	15	-	15	20	Р	30	30	05	55	Р
8	SD	45	75	30	<10	<10	20	F	Е	-	00	06	05	10	15	-	20	00	Р	00	00	00	00	Р
9	KC	15	95	80	<15	15	30	В	С	CANE	30	16	09	00	05	-	20	30	Р	40	30	05	65	F
10	НК	10	80	70	<5	<5	10	Е	D	WALKER	10	14	10	15	05	-	00	44	Р	10	15	20	05	Р
11	СК	20	90	70	<5	<5	10	D	D	-	20	14	10	15	10	-	00	49	Р	20	15	00	35	Р
12	CL	20	120	100	<10	<10	15	D	С	-	30	20	05	10	10	-	15	40	Р	20	30	00	50	Р
13	DS	10	110	100	<5	<5	15	С	D	-	20	20	10	15	05	-	15	45	Р	30	15	00	45	Р
14	SS	10	120	110	<5	00	20	Е	D	-	20	22	10	15	05	-	20	42	Р	10	15	00	25	Р
15	СК	15	105	90	00	00	10	Е	D	-	20	18	10	15	05	-	00	58	Р	10	15	00	25	Р

					STAB	ILITY									KNEE	SCO	RING			FU	NCTIO	NAL S	CORING	3
S. No.	Name	FFD	FF	ROM	4.0	м	Alignment Varus	Walking	Stairs	Walking Aids	Dain	DOM	Stat	ility	Flex.	Ext.	Alignment	Total	Knee	147 - 11 - i	Chains	D-J	Total	Knee
					AP	ML					Pain	KUM	AP	ML	Cont.	Lag	Varus	Score	Grade	waiking	stairs	Dea.	Score	Grade
16	DS	10	100	90	<15	<15	15	D	D	CANE	30	18	00	00	05	-	15	28	Р	20	15	05	30	Р
17	SS	30	90	60	<5	00	30	D	С	CANE	30	12	10	15	15	-	15	37	Р	20	30	05	45	Р
18	RS	60	90	30	00	00	30	Е	Е	WALKER	10	06	10	15	15	-	20	06	Р	10	00	20	00	Р
19	RS	60	100	40	00	00	30	Е	Е	WALKER	10	06	10	15	15	-	20	08	Р	10	00	20	00	Р
20	MS	20	110	90	<10	<10	20	D	D	-	20	18	05	10	10	-	20	23	Р	20	15	00	35	Р
21	DK	10	100	90	<5	<5	10	С	С	CANE	10	18	10	15	05	-	00	48	Р	30	30	05	55	Р
22	RS	10	90	80	<10	<10	15	С	D	-	20	16	05	10	05	-	15	31	Р	30	15	00	45	Р
23	SS	15	95	80	<10	<10	15	D	D	-	20	16	05	10	05	-	15	31	Р	20	15	00	35	Р
24	ML	30	105	75	00	00	10	С	D	-	30	15	10	15	15	-	00	55	Р	30	15	00	45	Р
25	SN	25	110	85	<5	<5	15	D	D	-	20	17	10	15	15	-	15	32	Р	20	15	00	35	Р
26	NC	30	90	60	<5	<5	10	Е	D	CANE	20	12	10	15	15	-	00	42	Р	10	15	05	20	Р
27	BK	15	100	85	<15	<15	15	D	D	-	30	17	00	00	5	-	15	27	Р	20	15	00	35	Р
28	RS	25	100	75	<5	<5	10	С	С	CANE	30	15	10	15	15	-	00	55	Р	30	30	05	55	Р
29	DK	15	90	75	00	00	15	D	С	-	20	15	10	15	05	-	15	40	Р	20	30	00	50	Р
30	GK	20	100	80	<5	00	10	С	С	CANE	10	16	10	15	10	-	00	41	Р	30	30	05	55	Р

FOLLOW-UP ASSESSMENT

					Sta	bilit y	Aligi	nment								Kno	ee Sco	oring				F	unctio	nal Sc	oring	
Sr. No.	Nam e	FF D	FF	RO M			Varu	Valgu	Walkin g	Stair s	Walking Aids	Pai	RO	Sta	bilit y	Flex	Ext	Alig	nment	Total	Knee	Walkin	Stair	Ded	Total	Knee
					АР	ML	s	s				n	M	АР	ML		Lag	Varu s	Valgu s	e	e	g	s		e	e
1	HR	00	10 5	105	00	00	00	05	A	В	CANE	45	21	10	15	00	-	00	00	91	E	50	40	05	85	E
2	AS	00	10 5	105	00	<05	00	06	А	В	-	50	21	10	15	00	-	00	00	96	Е	50	40	00	90	Е
3	MS	00	11 5	115	00	00	00	05	А	В	CANE	45	23	10	15	00	-	00	00	93	Е	50	40	05	85	Е
4	RS	00	11 0	110	<05	00	00	06	А	В	-	40	22	10	15	00	-	00	00	87	Е	50	40	00	90	Е
5	MS	00	11 5	115	00	00	00	08	А	A	-	40	23	10	15	00	-	00	00	88	Е	50	50	00	100	Е
6	SD	08	90	82	06	00	05	00	В	В	WALKE R	30	16	05	15	02	-	00	00	64	F	40	40	20	60	F
7	HR	00	11 0	110	00	00	00	02	А	В	CANE	45	22	10	15	00	-	00	04	88	Е	50	40	05	85	Е
8	SD	08	95	87	00	00	05	00	В	В	CANE	40	17	10	15	02	-	00	00	73	G	40	40	05	75	G
9	КС	00	10 5	105	08	07	05	00	В	В	CANE	45	21	05	10	00	-	00	00	81	G	40	40	05	75	G
10	НК	00	10 0	100	00	00	00	02	А	В	-	45	20	10	15	00	-	00	04	86	Е	50	40	00	90	E
11	СК	00	10 0	100	00	00	00	05	В	В	-	30	20	10	15	00	-	00	00	75	G	40	40	00	80	G
12	CL	00	12 0	120	00	00	00	<05	А	A	CANE	40	24	10	15	00	-	00	00	89	Е	50	50	05	95	Е
13	DS	00	11 0	110	00	00	00	06	В	В	-	30	22	10	15	00	-	00	00	77	G	40	40	00	80	G
14	SS	00	11 5	115	00	00	00	06	А	В	-	40	23	10	15	00	-	00	00	88	Е	50	40	00	90	Е
15	СК	00	10 0	100	00	00	00	05	А	В	CANE	40	20	10	15	00	-	00	00	85	Е	50	40	05	85	Е

					Sta	bility	Alig	gnment								Kn	ee So	coring				F	unctio	nal Sc	oring	
Sr. No.	Nam e	FF D	FF	RO M	АР	MI.	Va	Valgu	Walkin g	Stair s	Walking Aids	Pa	RO	Stal	bilit V	Flex	Ext	Aligr	ıment	Total Scor	Knee Grad	Walkin	Stair	Ded	Total Scor	Knee Grad
							rus	S				in	М	AP	ML		Lag	Varu s	Valgu s	e	e	g	S		e	e
16	DS	00	105	105	00	00	00	02	D	В	CANE	40	20	10	15	00	-	00	04	81	G	40	40	05	75	G
17	SS	00	115	110	00	00	00	05	А	В	-	40	22	10	15	02	-	00	00	85	Е	50	40	00	90	Е
18	RS	06	100	94	<05	<05	00	05	В	В	WALKER	40	19	10	15	02	-	00	00	82	G	40	40	20	60	F
19	RS	06	105	99	<05	<05	00	04	В	В	WALKER	30	20	10	15	02	-	00	08	65	F	40	40	20	60	F
20	MS	00	105	105	<05	00	00	05	А	В	-	40	21	10	15	00	-	00	00	86	Е	50	40	00	90	Е
21	DK	00	102	102	00	00	00	05	А	В	CANE	45	20	10	15	00	-	00	00	90	Е	50	40	05	85	Е
22	RS	00	105	105	<05	00	00	05	А	В	CANE	45	21	10	15	00	-	00	00	91	Е	50	40	05	85	Е
23	SS	00	108	108	00	<05	00	06	А	В	CANE	40	22	10	15	00	-	00	00	87	Е	50	40	05	85	Е
24	ML	05	110	105	00	00	00	06	А	В	CANE	45	21	10	15	02	-	00	00	89	Е	50	40	05	85	Е
25	SN	05	115	110	00	00	00	05	А	В	-	45	22	10	15	02	-	00	00	90	Е	50	40	00	90	Е
26	NC	00	110	110	00	<05	00	05	А	В	CANE	40	22	10	15	00	-	00	00	87	Е	50	40	05	85	Е
27	ВК	00	102	102	<05	<05	00	05	А	В	CANE	45	20	10	15	00	-	00	00	90	Е	50	40	05	85	Е
28	RS	00	106	106	00	00	00	06	А	A	-	40	21	10	15	00	-	00	00	91	Е	50	50	00	100	Е
29	DK	00	100	100	00	00	00	06	А	В	-	40	20	10	15	00	-	00	00	90	Е	50	40	00	90	Е
30	GK	00	110	110	00	00	00	06	А	В	CANE	40	22	10	15	00	-	00	00	92	Е	50	40	05	85	Е