

including those of the periosteum, had performed part of their functions—they had constructed the hyaline material of the bone, but there was a deficiency of bone earth in the part to render the structure hard, very much, as I before remarked, as if we were to place a soft foraminifera in distilled water and expected it under these conditions to encase itself in a shell. The thing is impossible, and so I believe it is out of the question for the round cells of the medulla to form hard bone in the case of infants fed, as our little patient was, during the first years of life. In some of these cases chemical analysis demonstrates that these rickety bones contain only about one-half the normal quantity of mineral matter. There seems to be something almost essential, in the mother's milk, to the perfect elaboration of the osseous system; and, if it is withheld, the consequences are rickets with all its complications. No sooner is the child able to masticate, and the glands of its stomach and intestinal canal are fully formed, so that he can assimilate miscellaneous articles of food, than the blood takes up the chemical constituents necessary to hardening the medullary structure, and dense hard bone is rapidly produced. The beading of the ribs and enlarged ends of the radius, tibia, and so on are due to the bulging outwards from pressure exercised on the soft extremities of the bones. The remarkable curvature of the bones in rickets is the result of the same cause.

From a consideration of these facts you will probably agree with me that we have good reason to suppose that the cause of rickets is not after all a matter of great mystery; it is evident that the fault upon which all the mischief depends originates soon after birth until dentition is completed. Hereditary tendencies perhaps have something to do with this affection, but it is equally certain that, in the majority of cases, there is no trace of hereditary disease in the families of rickety subjects. Rickets affects the rich and poor alike, and the more carefully we examine into the circumstances of individual cases the more evident it becomes that hand feeding during the first two years of a child's life is as the root of the evil—an idea, as I have before said, strengthened by the fact that neither poverty nor any other cause will induce the disease among infants nursed by their mothers. Clinical experience, as Dr. Parry of Philadelphia argues so well, teaches us the same lesson; for, if we recognize the affection in its early stages and insist on the patient being fed on proper food, the symptoms from which he may have been suffering disappear. It may be impossible, especially in the case of poor children, to provide a healthy wet-nurse, but much may be done by careful direction as to the infants' diet; and, in addition, by ordering cod-liver oil and the lacto-phosphate of iron. It is surprising how speedily a rickety child improves under treatment of this kind.

I dwelt at greater length than might have seemed necessary to you on the symptoms indicating the commencement of rickets; but you will understand the importance of appreciating the circumstances attending the onset of the disease, for if you recognize it in its early stages and apply treatment based on the principles above indicated, you may effectually cure the malady.

Supposing, however, the child has grown out of the first stage of rickets, and you are consulted regarding the deformities resulting from the abnormally soft condition of the bones, the question will arise, what are you then to do? As I have before remarked, a child's age is no criterion as to the state of the osseous structures. In some cases the bones remain soft until the patient is eight or ten years of age; and, so long as this is their condition, you will evidently endeavour to strengthen the distorted limbs and to keep the child from bearing the weight of his body upon them. But, in cases where the curvature of the limbs is very great, and the bones have already become hard, it is

wonderful how much they improve in the course of a few years. Rickety children frequently grow up to be remarkably powerful healthy individuals, so that I would limit any operative proceedings in rickets to those instances in which the abnormal condition of the bones is so great that the patient is unable to walk. Under these circumstances, especially with the aid of antiseptic dressings, we are unquestionably justified in dividing the curved bones or in excising a wedge-shaped piece out of them so as to straighten the distorted limb. Many cases of the kind are now on record, where the happiest results have succeeded operations of this description. It would be beyond my province to describe the surgical proceedings necessary in instances of the kind; in fact almost every case will require manipulation according to its special deformity, and the same remark applies to the mechanical appliances to be made use of in the earlier stage of rickets when the bones are soft, and may be moulded into something approaching their natural form. In going round the wards you will observe for yourselves the practice we adopt in these cases, always bearing in mind the unquestionable fact, that, under well-regulated diet, cod-liver oil and iron, many unpromising cases of rickets greatly improve; and, unless these matters are scrupulously attended to, no mechanical appliances, however ingenious they may be, will succeed in overcoming the deformities of rickets.

#### ON THE EXTRACTION OF THE LENS IN ITS CAPSULE.

By JOHN O'NEILL, M.D., *Officiating Civil Surgeon, Shahpur.*

WHILE officiating in Amritsar last summer, I performed the operation of extraction of cataract eighty-three times, and I now propose to state the measures I adopted, dwelling at length on my failures, and those cases in which the eyes were saved after a prolonged illness. The first five operations were performed according to Macnamara's method, as fully detailed in his ophthalmic work; but, as four of those eyes were lost, and the fifth regained only partial vision after long attendance, I was only too glad to abandon a method which in my hands did not promise to be very successful. Macnamara's triangular-bladed knife does not readily enter the eye, and, to ensure an incision of proper size, the eye-ball has to be much compressed, and this though the knife be perfectly sharp, and the cornea of no more than usual toughness. I can readily understand how the cornea may be sufficiently tough to resist the edges of this triangular blade, allowing only a very small opening to be made, quite insufficient for the removal of the lens. Above all, I look upon the introduction of the scoop into the eye as the grand objection to Macnamara's method. In some cases the scoop is absolutely necessary, as when the lens may have become so displaced during an operation that it cannot be extracted through the opening unless by means of such an instrument, but then it is the last weapon in our armoury, and is used, not because it is the best, but because it is the only means at our disposal.

I now seldom use the scoop. Formerly, the ready means it offered for the removal of lenticular fragments induced me to use it rather freely; but the almost constant retardation of recovery that took place on its use has led me to look upon it as the forlorn hope, never to be used if it can possibly be avoided. In my sixth case, it was determined to make the linear incision with a Von Graefe's knife, and perform iridectomy and laceration of the capsule, but having made the incision a rather free one, and performed iridectomy, the lens in its unruptured capsule spontaneously presented itself, and with the slightest pressure was removed. This eye did so well, the wound healing in forty-eight hours with an entire absence of pain, that I resolved to give a fair trial to the method of removing the lens in its capsule.

The pupil having been dilated with atropine, the patient was placed fully under chloroform, and the stop speculum introduced.

The conjunctiva was picked up with a forceps below and to the outward of the inferior margin of the cornea. The point of a Von Graefe's knife was then introduced immediately anterior to the margin of the cornea, and about midway between the horizontal diameter and the upper margin of the cornea. The narrow-bladed knife then passed straight across the anterior chamber to a corresponding point at the other side, transfixing the cornea, and with a sawing motion the knife cut upwards, forming a corneal flap, each point of its edge being equidistant from the cornea-sclerotic junction. There are three things to be noticed so far. Though the scleral conjunctiva was picked up by a forceps, it was only to steady the eye to some extent, not to fix it that the knife might be made to enter the cornea. I prefer, rather, having placed the knife where the cornea is to be entered, to exert a slight pressure, allowing the eye in consequence to revolve in its socket till the external rectus muscle prevents its farther revolution; the cornea of the eye now looking towards the nose. The eye-ball is now firmly fixed, and the entrance of the knife may be readily and deliberately made. Should the eye be steadied alone by holding the scleral conjunctiva at the inner side, this structure may be torn—a very likely accident should the cornea be of unusual toughness. With regard to the point of exit of the knife, it should be selected considerably, almost an eighth of an inch, anterior to what seems the cornea-sclerotic junction, for if, while the point of the knife is in the anterior chamber, it be directed straight at the cornea-sclerotic junction, it will very likely pierce the sclerotic itself. This, in all probability, is owing to the density of the cornea deflecting the point of the knife backwards. With reference to the sawing motion of the knife, it should consist of long sweeps from heel to point, and point to heel, three such generally sufficing to form the flap. The knife should cut both in pushing and withdrawing, for if it should cut only in withdrawing, it is possible in pushing back the knife the edge may leave the angle, and the subsequent cutting may cause a serrated edge to the cut cornea. The assistant, by picking up the scleral conjunctiva immediately below the cornea, draws the eye gently downwards, but only so much as to expose the upper margin of the incision; now if the conjunctiva, wounded during the operation, should bleed, and any of the blood have entered the anterior chamber, it may readily be removed by passing the handle of the knife horizontally over the cornea from below upwards. The blood having been removed, the iridectomy forceps was gently inserted, and the iris withdrawn. This was cut with the scissors at one angle of the flap, and then dragged from its ciliary attachments to near the other angle, where it was removed with the scissors. This was a very large iridectomy, and though latterly so much of the iris was not detached, I cannot help thinking that the larger the piece of iris removed the less likelihood there was of the lens being delayed in its exit, not to mention the lessened probability of iritis. There was frequently much bleeding from the iris, but it only occasioned slight trouble, as the handle of the knife, gently passed over the cornea from below upwards, removed the greater portion of the blood, at least leaving the pupil sufficiently clear to enable the lens to be distinctly seen. It is strange how in many cases there was not the slightest bleeding from the injury to the iris, although apparently under exactly the same conditions as when the bleeding was pretty free. The next step is to evacuate the lens. The eye being still drawn down by the assistant, the point of the left forefinger of the operator was placed on the sclerotic immediately above the wound, and fair and equable pressure kept up. This pressure is not to be entirely removed till the lens has been extracted, for, when the vitreous does escape, it makes its appearance between the lens and the scleral margin of the upper portion of the wound. The pressure at this point is communicated to the vitreous which tends to lift up the lens, the scleral margin at the same time being placed below the superior margin of the lens. The handle of the knife laid

horizontally across the cornea at its inferior half exercised at first a gentle and then a steadily increasing pressure. The pressure of the handle was not continuous, but of an alternating kind, as if the lens were gently forced out by a number of pushes. It was frequently found of the greatest use to alternate the pressure of the left forefinger, which was placed on the sclerotic immediately above the wound, with that exercised by the handle of the knife, producing a see-saw motion most effective in expelling the lens. After a little time the lens slowly moved towards the wound, and it is now most important to keep up the pressure of the left forefinger, for this is the instant at which the vitreous is likely to escape. When the lens in its capsule began to protrude, the operation was most slowly proceeded with, for the altered positions of the parts maintained for some time seemed to lead to a separation of the posterior portion of the capsule from the vitreous, as if such were the result of the prolonged tension of the parts. When a quarter of the lens has been extruded, the handle may be made to pass almost over the centre of the cornea, following up the lens as it were with support, but, all through, the pressure was of the intermittent kind above referred to. When three-fourths of the lens had escaped, the pressure was very much relaxed, and the assistant stood ready to liberate the conjunctiva that the corneal flap might follow closely on the lens as it passed out, its elasticity aiding in the removal of the lens and tending to keep back the vitreous which is now likely to follow. Sometimes the lens appeared to be retained in the wound at the last instant as if there was one point of the capsule which could not detach itself from the hyaloid membrane of the vitreous. In such a case a blunt forceps, by very gently grasping the lens close to the wound, may safely draw away the whole. If no vitreous escapes, the chances are one hundred to one the eye will be healed in forty-eight hours; should a portion of vitreous follow the lens, however small the quantity may be, the recovery will be certainly retarded, though at the same time, unless the quantity be large, it need not be looked upon as a very unfortunate accident. As soon as vitreous does make its appearance, provided the lens has been evacuated, it is best to immediately close the eye and apply the bandage. Any attempt to remove the exuded vitreous with a scissors can do no good, at the same time affording a possibility for more vitreous to escape as the eye is kept longer open.

Should the capsule rupture, the operation is proceeded with in the same manner. Any portions of lenticular matter left behind—and there is almost certain to be some—may, in nearly every case, be removed by passing the handle of the knife over the cornea from below upwards, the pressure of the left forefinger causing the vitreous to press forwards towards the cornea, and so putting the fragments to be removed on a plane superior to the wound. It is well to moisten the handle of the knife either with water or by touching the small quantity of aqueous humor which will be nearly always found at the palpebral margin, for, thus lubricated, it will glide more readily over the cornea, and inflict by its attrition much less injury on the highly delicate conjunctiva. When the operation was completed, the brow was smeared with diluted extract of belladonna, and a light compress of cotton wool and a flannel bandage applied.

The importance of the after-treatment cannot be too highly estimated.

The essence of it is, that the patient is not to touch the bandage, and the difficulties I had to contend with in gaining this point were very many; and, should the case be one of those in which the untouched eye is capable of vision, additional vigilance must be exercised to prevent any shifting of the bandage. It is so difficult for the patient to tolerate the enforced loss of vision for even two days, that, by the evening of the first, he lifts up the edge of the bandage covering the sound eye, and peeps about, regardless of all the injunctions he has received.

He cannot understand how the operated eye, which is carefully kept bound up, can suffer, the fact being of course that both eyes move simultaneously, and the consequent constant rubbing of the corneal wound against the eyelid leads to irritation, and, if not to sloughing of the cornea, certainly to a retardation of recovery. In such a case, it is well to place crosswise over the face and bandage three or four long strips of sticking plaster. The criterion of success is absence of pain, and I have not met with a single case in which the eye went to the bad with absence of pain. As long as there is no pain, I refrain from touching the bandage, except to tighten the tapes should they become loose, till forty-eight hours, or the second day after the operation. The lids are then gently raised; and, if there be little or no conjunctivitis, the case is in the highest degree promising. The patient is requested to open the eye, having done which, the eyebrow may be raised, so drawing up the eyelid sufficiently to give a view of the state of the wound. This is a much better plan than lifting up the eyelid, and directing the patient to look down, for if he be at all nervous, the eye will be instinctively turned up, and it will be impossible to see the state of the incision; when the patient is directed to look forwards, he becomes re-assured, and the lid may then be readily raised.

If all be well, a solution of extract, belladon. is rubbed to the eyebrow, and a fresh bandage applied. Formerly, I dropped into the eye a solution of atropine, but I had reason to believe it tended to irritate the imperfectly healed wound; and, subsequent to the operation, I have completely abandoned its use for the external application of extract belladon. On the slightest indication of pain in the eye, a blister, the size of a rupee, was applied to the temple, and solution of muriate of morphia administered internally. Another point worthy of attention is, that the patient should enjoy absolute rest and quiet. If possible, for the first four days, he should have a room completely to himself, and if there be a paucity of hospital accommodation, he should be placed in a room with any patient too ill to keep up much conversation. On no account, I believe, ought two cases operated on the same day be put in the same room. Magpies are not more loquacious. Truly, a fellow-feeling makes them wondrous kind; they become much excited, and the reparative process is seriously impaired, and it is well if they do not remove the bandages that they may compare notes, clumsily adjusting them before the surgeon's arrival.

Of the eighty-three cases I operated on, sixteen were unsuccessful; four of which were performed according to Macnamara's method, and notes of the remaining twelve I shall now subjoin, it being understood, unless where otherwise expressed, that iridectomy was performed and the capsule unlacerated.

CASE 12. F. — D. —, female, aged 60. The operation was favorable in every respect. On account of slight pain, on the evening of the operation extract belladon., gr. i in pill, was prescribed. On the evening of the second day, the patient became most restless, fidgety and highly excited. She ran into another ward and tore off the bandages, and when seen on the morning of the third day after the operation had a piece of twine tied over the eyes. The cornea sloughed, and vision was lost. The patient altogether received only five grains of the extract in thirty-six hours. On the medicine being suspended, her mind became again tranquil.

CASE 22.—Female, Hindoo, aged 60. Pressure used to dislodge the lens during the operation was unsuccessful, the lens making no progress towards the wound, but appeared to pass backwards. The scoop was introduced, but a portion only of the lens was removed, the remainder sank away as if the vitreous were water. In this case, the scoop was not passed back far enough, an effort made to get it just behind the lens failing, the lens disappeared. Vision was lost.

CASE 32.—Male Hindoo, aged 58. When about three-fourths of the lens had protruded, the vitreous commenced to ooze

out at the angles of the wound. Small portions of the capsule appeared to be firmly adherent to the vitreous. Curette introduced, and passed behind the capsule, detaching it from the vitreous; lens came away, capsule unruptured. About three minims of vitreous escaped. Inflammation ensued, and vision was lost.

CASE 42.—On trying to press out the lens, the vitreous escaped. The capsule was then lacerated, and a scoop introduced, the lens at the time having passed upwards almost out of sight. The scoop removed the lens entire. Inflammation, suppuration, loss of vision.

The above four cases curiously enough to place at regular intervals of ten.

CASE 49.—A small quantity of vitreous escaped on the removal of the lens; otherwise everything was satisfactory. Inflammation was set up. Unsuccessful.

CASE 53.—Mussulman, female, aged 40. In this patient the eye-ball was very prominent, and seemed partly out of the socket. There was considerable perception of light. On making the incision the lens readily and spontaneously presented itself, and with the greatest ease passed out; no iridectomy; about a minim of vitreous escaped. About four hours after the operation, internal bleeding took place, the greater portion of the vitreous being forced out. The eye was of course lost.

Shortly after this, I operated on a somewhat similar eye with the same unfortunate result. This time the bleeding took place immediately the patient had been placed on the charpoy. Subsequently, several prominent eyes came under my observation, but nothing would induce me to operate.

CASE 59.—The steps of the operation were most successful. When the bandage had been applied, vomiting commenced, a large quantity of the vitreous was forced out, and a few drops of blood stained the bandage. Unsuccessful.

CASE 62.—Seikh, male, aged 50. When the incision was made, retching commenced, speculum was removed. When the retching ceased the lids were parted, and the lens was seen protruding from the wound, about one quarter of it having been expelled; retching again came on, and it soon became evident that the lens was entirely expelled, its presence beneath the eyelid causing a distinct prominence. When retching completely stopped, the lids were opened, and the lens removed from the inner canthus. There was much escape of vitreous; the wound gaping widely. No iridectomy. Unsuccessful.

CASE 74.—Mussulman, male, aged 60. On pressing out the lens the vitreous exuded, about three minims. Scoop introduced removing lens, but lacerating the capsule. A bubble of air entered the anterior chamber. It was all removed, excepting a minute bubble, the size of the point of a pin. As the vitreous was exuding more freely, the eye was closed. Unsuccessful.

CASE 76.—Hindoo, female, aged 50. On very slight pressure the lens made its appearance at the wound suddenly; as there was fear it might jump out too quickly pressure was most cautiously applied; still the lens sprang out, followed by a large discharge of vitreous. Unsuccessful.

CASE 77.—Hindoo, male, 60. There was some difficulty found in expelling the lens, so, when a small portion protruded, the capsule was lacerated, when the lens easily escaped. The incision in the cornea was not made sufficiently large. The scoop was used to remove some fragments of lenticular matter. Iritis was set up, followed by infiltration of the cornea with pus. Unsuccessful.

CASE 78.—Mussulman, male, aged 45. On pressure, vitreous escaped before the lens; lens removed with scoop, which was repeatedly introduced to remove fragments from the anterior chamber; much vitreous escaped. Unsuccessful.

And so ends this black list.

I shall now give a few cases where the result was successful, though complications arose which much retarded recovery.

CASE 10.—Hindoo, female, aged 40. As the greater portion of the lens was extruded the capsule burst, and on removal of lens

much lenticular matter was seen in the anterior chamber. Greater portion removed by scoop; small fragment left behind, as it did not come readily away. This eye slowly recovered; much chemosis; iritis with severe supra-orbital pain; temple blistered; liq. morphiae internally. Patient was under treatment four weeks, at the end of which there was slight conjunctivitis. Vision was very good, but the eye readily tired.

CASE 15.—Mussulman, male, aged 40. Having made the incision the lens spontaneously moved towards the wound pressing the iris before it. With the curette the iris was freed from the lens above as well as at both sides, and with slight pressure the lens came away in its capsule, leaving the pupil as usual perfectly clear. No escape of vitreous. The iris was not cut, and the pupil contracted to its normal size. Examination the second day after the operation showed the iris had prolapsed. There was no pain, but as I feared the consequences, the patient was placed on the table, and the prolapse snipped off with a scissors; the wound rapidly healed. The man, who is a Munshi, was supplied with glasses, and he now works at his occupation.

CASE 16.—Sikh, male, aged 70. Incision rather smaller than usual. On very slight pressure the lens protruded pushing iris before it; iris was gently liberated; wound being too small the capsule burst, discharging its milky contents outwards. Scoop introduced to remove the nucleus, but did not do so completely, leaving it in the wound, the greater part being external; it was then gently lifted by applying a delicate probe at the angles of the wound. No escape of vitreous. This case did very well.

After this case I removed a larger portion of iris than before.

CASE 25.—Mussulman, female, aged 32. Capsule burst as lens made its exit; large escape of vitreous took place, nearly one-fourth. This, though apparently a hopeless case, made a capital recovery, the patient leaving hospital after three weeks, with very fair sight.

CASE 41.—Hindoo, male, aged 55. In this case, like No. 22 already recorded, the lens fell into the vitreous instead of moving towards the opening. The scoop was introduced well behind the lens, which was removed; slight escape of vitreous. Successful.

CASE 57.—Mussulman, male, aged 60. This eye was in the slightest degree abnormally prominent; perception of light fair. Bearing in mind case noted above, a rather small incision was made, and iridectomy having been performed the capsule was lacerated. Successful.

CASE 57.—Mussulman, male, aged 60. This eye was in the slightest degree abnormally prominent; perception of light fair. Bearing in mind case noted above, a rather small incision was made, and iridectomy having been performed the capsule was lacerated. Slight pressure removed the lens; fragments of lenticular matter were removed with scoop. Successful.

The remainder of the sixty-seven successful cases are scarcely deserving of separate record. As they terminated fortunately, though with occasional slight drawbacks, there is little information to be gained from studying them severally.

The liability to rupture of the capsule is every great, and the liability of the vitreous to escape is greater still. Of eighty cases, the lens was removed in its capsule without escape of vitreous thirty times; the capsule was ruptured, but no escape of vitreous took place twenty-one times: and vitreous escaped twenty-six times, in eighteen of which the capsule was lacerated, and in the remaining eight the lens was removed in its capsule. The chance of removing the lens in its capsule successfully is much greater with a soft than a hard cataract.

The above is the whole of my experience of cataract operations. In the next hundred cases I shall lacerate the capsule previous to attempting the removal of the lens, and as early as possible shall submit another record of failures and successes.

MEDICO-TOPOGRAPHICAL NOTES ON SUBATHOO.

By F. R. HOGG, Surgeon-Major, A.M.D.

(Concluded from page 65.)

*Meteorology and Climate.*—A champagne glass on the dinner table affords some idea of the position of Subathoo as compared with the flat plain below; at the bottom of the glass would be Subathoo 4,253 feet, with Kussowlie 6,335; the Sanawar Lawrence Asylum, Dugshai, 6,100; the Crole, Simla, Jutog, 7,100, and hills above the native states being perched at intervals on the rim above.

Mean Temperature.

	January.	February.	March.	April.	May.
Kussowlie ...	41	39	49	58	68
Dugshai ...	42	43	51	51	58
Simla ...	40	44	53	61	66
Sanawar ...	45	44	52	65	69
Lahore ...	55	58	67	78	89

	June.	July.	August.	September.	October.	November.	December.
72	71	70	68	61	58	44	
70	71	71	69	61	54	42	
80	75	73	70	67	52	46	
73	67	65	67	55	51	46	
94	87	87	84	74	65	56	

At Kussowlie, in 1877, according to Dr. Robotham, 90° in June and 20° in January represented the maximum and minimum temperature as compared with 82° and 30° at Dugshai according to Dr. Robinson, and with 91° and 22° at Simla. The mean daily range at Kussowlee is 12° in January, 16° in December, 20° in June, and 21° in November. Blandford, in his *Vade Mecum*, never mentions Subathoo, where no native dispensary with observatory exists, and the meteorological records noted by different regiments are carried away. In 1824, Dr. Jeffrys recorded the highest and lowest temperatures in July 78° to 89° and 65° to 75°, compared to 61° to 74° and 56° to 65° at Simla. June 24th, the thermometer stood 96° at Subathoo to 81° at Simla. The prevailing winds at Subathoo are westerly, the average temperature exceeds 70°,—warmer than the hills above, cooler than the plains below; there is less fog, damp, and mist and no great range of temperature, so this sub-tropical climate may be termed equable. The following temperatures were recorded in the upper wards of the hospital up above, cooler and more exposed than the station below:—

	7 A.M.	12 NOON.	5 P.M.
January 1877 ...	46 to 54	48 to 56	46 to 56
February ..	44 ,, 50	45 ,, 59	44 ,, 59
March ..	50 ,, 60	52 ,, 64	51 ,, 64
April ..	54 ,, 67	56 ,, 69	58 ,, 68
May ..	61 ,, 76	65 ,, 84	67 ,, 85
June ..	70 ,, 84	72 ,, 87	72 ,, 88
July ..	72 ,, 82	74 ,, 85	73 ,, 85
August ..	71 ,, 82	74 ,, 85	71 ,, 83
September ..	71 ,, 76	75 ,, 79	74 ,, 80
October ..	62 ,, 76	62 ,, 78	63 ,, 78
November 1876 ..	55 ,, 62	58 ,, 64	56 ,, 63
December ..	51 ,, 57	55 ,, 61	54 ,, 59